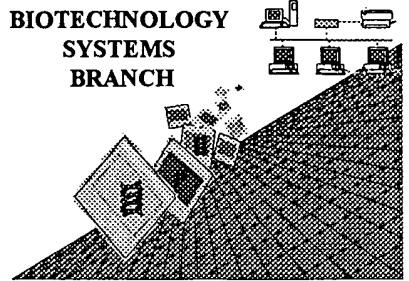


RAW SEQUENCE LISTING

ERROR REPORT



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following CRF diskette:

Application Serial Number: 09/198,723

Art Unit / Team No.: 0186

Date Processed by STIC: 12/09/98

THE ATTACHED PRINTOUT EXPLAINS THE ERRORS DETECTED.

PLEASE BE SURE TO FORWARD THIS INFORMATION TO THE APPLICANTS BY EITHER:

1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANTS ALONG WITH A NOTICE TO COMPLY or,

2) CALLING APPLICANTS AND FAXING THEM A COPY OF THE PRINTOUT WITH A NOTICE TO COMPLY

THIS WILL INSURE THAT THE NEXT SUBMISSION RECEIVED FROM THEM WILL BE ERROR FREE.

IF YOU HAVE ANY FURTHER QUESTIONS, PLEASE CALL:

ARTI SHAH 703-308-4212

INPUT SET: S30248.raw

This Raw Listing contains the General Information Section and those Sequences containing ERRORS.

09/198723

(2) INFORMATION FOR SEQ ID NO:22:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 4 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:

Pro Ala Gly Gly
1

(2) INFORMATION FOR SEQ ID NO:22:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 1964 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

- (A) NAME/KEY: CDS
- (B) LOCATION: 1..1964

(2) INFORMATION FOR SEQ ID NO:23:

Please Note!
Remove all
forget markers
throughout
listing: They
start appearing in
Sequence I.

What is this?
(Seq. 22 is
already mentioned
above)

8/198723

(2) INFORMATION FOR SEQ ID NO:24:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 54 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE CDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:

Ser Thr Trp Val Leu Val Gly Gly Val Leu Ala Ala Leu Ala Ala Tyr
1 5 10 15

09/198723

(2) INFORMATION FOR SEQ ID NO:60:

(i) SEQUENCE CHARACTERISTICS: 646
(A) LENGTH: 668 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:60:

Met His Met His His His His His Leu Val Pro Arg Gly Ser Ala
1 5 10 15

Pro Ile Thr Ala Tyr Ser Gln Gln Thr Arg Gly Leu Leu Gly Cys Lys
20 25 30

Ile Thr Ser Leu Thr Gly Arg Asp Lys Asn Gln Val Glu Gly Glu Val
35 40 45

Gln Val Val Ser Thr Ala Thr Gln Ser Phe Leu Ala Thr Cys Val Asn
50 55 60

Gly Val Cys Trp Thr Val Tyr His Gly Ala Gly Ser Lys Thr Leu Ala
65 70 75 80

Gly Pro Lys Gly Pro Ile Thr Gln Met Tyr Thr Asn Val Asp Gln Asp
85 90 95

Leu Val Gly Trp Gln Ala Pro Pro Gly Ala Arg Ser Leu Thr Pro Cys
100 105 110

Thr Cys Gly Ser Ser Asp Leu Tyr Leu Val Thr Arg His Ala Asp Val
115 120 125

Ile Pro Val Arg Arg Arg Gly Asp Ser Arg Gly Ser Leu Leu Ser Pro
130 135 140

Arg Pro Val Ser Tyr Leu Lys Gly Ser Ser Gly Gly Pro Leu Leu Cys
145 150 155 160

Pro Ser Gly His Ala Val Gly Ile Phe Arg Ala Ala Val Cys Thr Arg
165 170 175

Gly Val Ala Lys Ala Val Asp Phe Val Pro Val Glu Ser Met Glu Thr
180 185 190

Thr Met Arg Ser Pro Val Phe Thr Asp Asn Ser Ser Pro Pro Ala Val
195 200 205

Pro Gln Ser Phe Gln Val Ala His Leu His Ala Pro Thr Gly Ser Gly
210 215 220

Lys Ser Thr Lys Val Pro Ala Ala Tyr Ala Ala Gln Gly Tyr Lys Val
225 230 235 240

Leu Val Leu Asn Pro Ser Val Ala Ala Thr Leu Gly Phe Gly Ala Tyr

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245

250

255

Met Ser Lys Ala His Gly Ile Asp Pro Asn Ile Arg Thr Gly Val Arg
260 265 270

Thr Ile Thr Thr Gly Ala Pro Val Thr Tyr Ser Thr Tyr Gly Lys Phe
275 280 285

Leu Ala Asp Gly Gly Cys Ser Gly Gly Ala Tyr Asp Ile Ile Ile Cys
290 295 300

Asp Glu Cys His Ser Thr Asp Ser Thr Thr Ile Leu Gly Ile Gly Thr
305 310 315 320

Val Leu Asp Gln Ala Glu Thr Ala Gly Ala Arg Leu Val Val Leu Ala
325 330 335

Thr Ala Thr Pro Pro Gly Ser Val Thr Val Pro His Pro Asn Ile Glu
340 345 350

Glu Val Ala Leu Ser Asn Thr Gly Glu Ile Pro Phe Tyr Gly Lys Ala
355 360 365

Ile Pro Ile Glu Ala Ile Arg Gly Gly Arg His Leu Ile Phe Cys His
370 375 380

Ser Lys Lys Lys Cys Asp Glu Leu Ala Ala Lys Leu Ser Gly Leu Gly
385 390 395 400

Ile Asn Ala Val Ala Tyr Tyr Arg Gly Leu Asp Val Ser Val Ile Pro
405 410 415

Thr Ile Gly Asp Val Val Val Ala Thr Asp Ala Leu Met Thr Gly
420 425 430

Tyr Thr Gly Asp Phe Asp Ser Val Ile Asp Cys Asn Thr Cys Val Thr
435 440 445

Gln Thr Val Asp Phe Ser Leu Asp Pro Thr Phe Thr Ile Glu Thr Thr
450 455 460

Thr Val Pro Gln Asp Ala Val Ser Arg Ser Gln Arg Arg Gly Arg Thr
465 470 475 480

Gly Arg Gly Arg Arg Gly Ile Tyr Arg Phe Val Thr Pro Gly Glu Arg
485 490 495

Pro Ser Gly Met Phe Asp Ser Ser Val Leu Cys Glu Cys Tyr Asp Ala
500 505 510

Gly Cys Ala Trp Tyr Glu Leu Thr Pro Ala Glu Thr Ser Val Arg Leu
515 520 525

Arg Ala Tyr Leu Asn Thr Pro Gly Leu Pro Val Cys Gln Asp His Leu
530 535 540

Glu Phe Trp Glu Ser Val Phe Thr Gly Leu Thr His Ile Asp Ala His

*all
next
page*

545

550

555

560

Phe Leu Ser Gln Thr Lys Gln Ala Gly Asp Asn Phe Pro Tyr Leu Val
 565 570 575

Ala Tyr Gln Ala Thr Val Cys Ala Arg Ala Gln Ala Pro Pro Pro Ser
 580 585 590

Trp Asp Gln Met Trp Lys Cys Leu Ile Arg Leu Lys Pro Thr Leu His
 595 600 605

Gly Pro Thr Pro Leu Leu Tyr Arg Leu Gly Ala Val Gln Asn Glu Val
 610 615 620

Thr Leu Thr His Pro Ile Thr Lys Tyr Ile Met Ala Cys Met Ser Ala
 625 630 635 640

Asp Leu Glu Val Val Thr *¹ [Glu Phe Glu Leu Arg Arg Gln Ala Cys
 645 650 655 655]

Gly Arg Thr Arg Ala Pro Pro Pro Pro Pro Leu Arg]
 10 660 15 665 20

Any group of four
more amino acids
following a stop codon
 (*) needs its own
SEQ ID NO.. Please
 adjust the
 (iii) NUMBER OF SEQUENCES,
 response, too
 (p.1)

09/198723

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 666 amino acids
- (B) TYPE: amino acid
- (C) TOPOLOGY: linear

→ 646 shown

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:63:

Met His Met His His His His His Leu Val Pro Arg Gly Ser Ala
1 5 10 15

Pro Ile Thr Ala Tyr Ser Gln Gln Thr Arg Gly Leu Leu Gly Cys Ile
20 25 30

Lys Thr Ser Leu Thr Gly Arg Asp Lys Asn Gln Val Glu Gly Glu Val
35 40 45

Gln Val Val Ser Thr Ala Thr Gln Ser Phe Leu Ala Thr Cys Val Asn
50 55 60

Gly Val Cys Trp Thr Val Tyr His Gly Ala Gly Ser Lys Thr Leu Ala
65 70 75 80

Gly Pro Lys Gly Pro Ile Thr Gln Met Tyr Thr Asn Val Asp Gln Asp
85 90 95

Leu Val Gly Trp Gln Ala Pro Pro Gly Ala Arg Ser Leu Thr Pro Cys
100 105 110

Thr Cys Gly Ser Ser Asp Leu Tyr Leu Val Thr Arg His Ala Asp Val
115 120 125

Ile Pro Val Arg Arg Arg Gly Asp Ser Arg Gly Ser Leu Leu Ser Pro
130 135 140

Arg Pro Val Ser Tyr Leu Lys Gly Ser Ser Gly Gly Pro Leu Leu Cys
145 150 155 160

Pro Ser Gly His Ala Val Gly Ile Phe Arg Ala Ala Val Cys Thr Arg
165 170 175

Gly Val Ala Lys Ala Val Asp Phe Val Pro Val Glu Ser Met Glu Thr
180 185 190

Thr Met Arg Ser Pro Val Phe Thr Asp Asn Ser Ser Pro Pro Ala Val
195 200 205

Pro Gln Ser Phe Gln Val Ala His Leu His Ala Pro Thr Gly Ser Gly
210 215 220

Lys Ser Thr Lys Val Pro Ala Ala Tyr Ala Ala Gln Gly Tyr Lys Val
225 230 235 240

Leu Val Leu Asn Pro Ser Val Ala Ala Thr Leu Gly Phe Gly Ala Tyr
245 250 255

09/198723

Met Ser Lys Ala His Gly Ile Asp Pro Asn Ile Arg Thr Gly Val Arg
260 265 270

Thr Ile Thr Thr Gly Ala Pro Val Thr Tyr Ser Thr Tyr Gly Lys Phe
275 280 285

Leu Ala Asp Gly Gly Cys Ser Gly Gly Ala Tyr Asp Ile Ile Ile Cys
290 295 300

Asp Glu Cys His Ser Thr Asp Ser Thr Thr Ile Leu Gly Ile Gly Thr
305 310 315 320

Val Leu Asp Gln Ala Glu Thr Ala Gly Ala Arg Leu Val Val Leu Ala
325 330 335

Thr Ala Thr Pro Pro Gly Ser Val Thr Val Pro His Pro Asn Ile Glu
340 345 350

Glu Val Ala Leu Ser Asn Thr Gly Glu Ile Pro Phe Tyr Gly Lys Ala
355 360 365

Ile Pro Ile Glu Ala Ile Arg Gly Gly Arg His Leu Ile Phe Cys His
370 375 380

Ser Lys Lys Lys Cys Asp Glu Leu Ala Ala Lys Leu Ser Gly Leu Gly
385 390 395 400

Ile Asn Ala Val Ala Tyr Tyr Arg Gly Leu Asp Val Ser Val Ile Pro
405 410 415

Thr Ile Gly Asp Val Val Val Val Ala Thr Asp Ala Leu Met Thr Gly
420 425 430

Tyr Thr Gly Asp Phe Asp Ser Val Ile Asp Cys Asn Thr Cys Val Thr
435 440 445

Gln Thr Val Asp Phe Ser Leu Asp Pro Thr Phe Thr Ile Glu Thr Thr
450 455 460

Thr Val Pro Gln Asp Ala Val Ser Arg Ser Gln Arg Arg Gly Arg Thr
465 470 475 480

Gly Arg Gly Arg Arg Gly Ile Tyr Arg Phe Val Thr Pro Gly Glu Arg
485 490 495

Pro Ser Gly Met Phe Asp Ser Ser Val Leu Cys Glu Cys Tyr Asp Ala
500 505 510

Gly Cys Ala Trp Tyr Glu Leu Thr Pro Ala Glu Thr Ser Val Arg Leu
515 520 525

Arg Ala Tyr Leu Asn Thr Pro Gly Leu Pro Val Cys Gln Asp His Leu
530 535 540

Glu Phe Trp Glu Ser Val Phe Thr Gly Leu Thr His Ile Asp Ala His
545 550 555 560

09/198723

Phe Leu Ser Gln Thr Lys Gln Ala Gly Asp Asn Phe Pro Tyr Leu Val
565 570 575

Ala Tyr Gln Ala Thr Val Cys Ala Arg Ala Gln Ala Pro Pro Pro Ser
580 585 590

Trp Asp Gln Met Trp Lys Cys Leu Ile Arg Leu Lys Pro Thr Leu His
595 600 605

Gly Pro Thr Pro Leu Leu Tyr Arg Leu Gly Ala Val Gln Asn Glu Val
610 615 620

Thr Leu Thr His Pro Ile Thr Lys Tyr Ile Met Ala Cys Met Ser Ala
625 630 635 640

Asp Leu Glu Val Val Thr ** delete*
645
↑
insert

09/98,723

(2) INFORMATION FOR SEQ ID NO:66:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 668 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

646 shown

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:66:

Met His Met His His His His His Leu Val Pro Arg Gly Ser Ala
1 5 10 15

Pro Ile Thr Ala Tyr Ser Gln Gln Thr Arg Gly Leu Leu Gly Cys Ile
20 25 30

Ile Thr Ser Leu Thr Gly Arg Asp Lys Asn Gln Val Glu Gly Glu Val
35 40 45

Gln Val Val Ser Thr Ala Thr Gln Ser Phe Leu Ala Thr Cys Val Asn
50 55 60

Gly Val Cys Trp Thr Val Tyr His Gly Ala Gly Ser Lys Thr Leu Ala
65 70 75 80

Gly Pro Lys Gly Pro Ile Thr Gln Met Tyr Thr Asn Val Asp Gln Asp
85 90 95

Leu Val Gly Trp Gln Ala Pro Pro Gly Ala Arg Ser Leu Thr Pro Cys
100 105 110

Thr Cys Gly Ser Ser Asp Leu Tyr Leu Val Thr Arg His Ala Asp Val
115 120 125

Ile Pro Val Arg Arg Arg Gly Asp Ser Arg Gly Ser Leu Leu Ser Pro
130 135 140

Arg Pro Val Ser Tyr Leu Lys Gly Ser Ala Gly Gly Pro Leu Leu Cys
145 150 155 160

Pro Ser Gly His Ala Val Gly Ile Phe Arg Ala Ala Val Cys Thr Arg
165 170 175

Gly Val Ala Lys Ala Val Asp Phe Val Pro Val Glu Ser Met Glu Thr
180 185 190

Thr Met Arg Ser Pro Val Phe Thr Asp Asn Ser Ser Pro Pro Ala Val
195 200 205

Pro Gln Ser Phe Gln Val Ala His Leu His Ala Pro Thr Gly Ser Gly
210 215 220

Lys Ser Thr Lys Val Pro Ala Ala Tyr Ala Ala Gln Gly Tyr Lys Val
225 230 235 240

Leu Val Leu Asn Pro Ser Val Ala Ala Thr Leu Gly Phe Gly Ala Tyr

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245

250

255

Met Ser Lys Ala His Gly Ile Asp Pro Asn Ile Arg Thr Gly Val Arg
260 265 270

Thr Ile Thr Thr Gly Ala Pro Val Thr Tyr Ser Thr Tyr Gly Lys Phe
275 280 285

Leu Ala Asp Gly Gly Cys Ser Gly Gly Ala Tyr Asp Ile Ile Ile Cys
290 295 300

Asp Glu Cys His Ser Thr Asp Ser Thr Thr Ile Leu Gly Ile Gly Thr
305 310 315 320

Val Leu Asp Gln Ala Glu Thr Ala Gly Ala Arg Leu Val Val Leu Ala
325 330 335

Thr Ala Thr Pro Pro Gly Ser Val Thr Val Pro His Pro Asn Ile Glu
340 345 350

Glu Val Ala Leu Ser Asn Thr Gly Glu Ile Pro Phe Tyr Gly Lys Ala
355 360 365

Ile Pro Ile Glu Ala Ile Arg Gly Gly Arg His Leu Ile Phe Cys His
370 375 380

Ser Lys Lys Cys Asp Glu Leu Ala Ala Lys Leu Ser Gly Leu Gly
385 390 395 400

Ile Asn Ala Val Ala Tyr Tyr Arg Gly Leu Asp Val Ser Val Ile Pro
405 410 415

Thr Ile Gly Asp Val Val Val Ala Thr Asp Ala Leu Met Thr Gly
420 425 430

Tyr Thr Gly Asp Phe Asp Ser Val Ile Asp Cys Asn Thr Cys Val Thr
435 440 445

Gln Thr Val Asp Phe Ser Leu Asp Pro Thr Phe Thr Ile Glu Thr Thr
450 455 460

Thr Val Pro Gln Asp Ala Val Ser Arg Ser Gln Arg Arg Gly Arg Thr
465 470 475 480

Gly Arg Gly Arg Arg Gly Ile Tyr Arg Phe Val Thr Pro Gly Glu Arg
485 490 495

Pro Ser Gly Met Phe Asp Ser Ser Val Leu Cys Glu Cys Tyr Asp Ala
500 505 510

Gly Cys Ala Trp Tyr Glu Leu Thr Pro Ala Glu Thr Ser Val Arg Leu
515 520 525

Arg Ala Tyr Leu Asn Thr Pro Gly Leu Pro Val Cys Gln Asp His Leu
530 535 540

Glu Phe Trp Glu Ser Val Phe Thr Gly Leu Thr His Ile Asp Ala His

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545 550 555 560

Phe Leu Ser Gln Thr Lys Gln Ala Gly Asp Asn Phe Pro Tyr Leu Val
565 570 575

Ala Tyr Gln Ala Thr Val Cys Ala Arg Ala Gln Ala Pro Pro Pro Ser
580 585 590

Trp Asp Gln Met Trp Lys Cys Leu Ile Arg Leu Lys Pro Thr Leu His
595 600 605

Gly Pro Thr Pro Leu Leu Tyr Arg Leu Gly Ala Val Gln Asn Glu Val
610 615 620

Thr Leu Thr His Pro Ile Thr Lys Tyr Ile Met Ala Cys Met Ser Ala
625 630 635 640

Asp Leu Glu Val Val Thr. (*)
645

↑

09/198723

(2) INFORMATION FOR SEQ ID NO:69:

(i) SEQUENCE CHARACTERISTICS: 646 *shown*
(A) LENGTH: 668 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:69:

Met His Met His His His His His Leu Val Pro Arg Gly Ser Ala
1 5 10 15

Pro Ile Thr Ala Tyr Ser Gln Gln Thr Arg Gly Leu Leu Gly Cys Ile
20 25 30

Ile Thr Ser Leu Thr Gly Arg Asp Lys Asn Gln Val Glu Gly Glu Val
35 40 45

Gln Val Val Ser Thr Ala Thr Gln Ser Phe Leu Ala Thr Cys Val Asn
50 55 60

Gly Val Cys Trp Thr Val Tyr His Gly Ala Gly Ser Lys Thr Leu Ala
65 70 75 80

Gly Pro Lys Gly Pro Ile Thr Gln Met Tyr Thr Asn Val Asp Gln Asp
85 90 95

Leu Val Gly Trp Gln Ala Pro Pro Gly Ala Arg Ser Leu Thr Pro Cys
100 105 110

Thr Cys Gly Ser Ser Asp Leu Tyr Leu Val Thr Arg His Ala Asp Val
115 120 125

Ile Pro Val Arg Arg Arg Gly Asp Ser Arg Gly Ser Leu Leu Ser Pro
130 135 140

Arg Pro Val Ser Tyr Leu Lys Gly Ser Ser Gly Gly Pro Leu Leu Cys
145 150 155 160

Pro Ser Gly His Ala Val Gly Ile Phe Arg Ala Ala Val Cys Thr Arg
165 170 175

Gly Val Ala Lys Ala Val Asp Phe Val Pro Val Glu Ser Met Glu Thr
180 185 190

Thr Met Arg Ser Pro Val Phe Thr Asp Asn Ser Ser Pro Pro Ala Val
195 200 205

Pro Gln Ser Phe Gln Val Ala His Leu His Ala Pro Thr Gly Ser Gly
210 215 220

Lys Ser Thr Lys Val Pro Ala Ala Tyr Ala Ala Gln Gly Tyr Lys Val
225 230 235 240

Leu Val Leu Asn Pro Ser Val Ala Ala Thr Leu Gly Phe Gly Ala Tyr

09/198723

245

250

255

Met Ser Lys Ala His Gly Ile Asp Pro Asn Ile Arg Thr Gly Val Arg
260 265 270

Thr Ile Thr Thr Gly Ala Pro Val Thr Tyr Ser Thr Tyr Gly Lys Phe
275 280 285

Leu Ala Asp Gly Gly Cys Ser Gly Gly Ala Tyr Asp Ile Ile Ile Cys
290 295 300

Asp Glu Cys His Ser Thr Asp Ser Thr Thr Ile Leu Gly Ile Gly Thr
305 310 315 320

Val Leu Asp Gln Ala Glu Thr Ala Gly Ala Arg Leu Val Val Leu Ala
325 330 335

Thr Ala Thr Pro Pro Gly Ser Val Thr Val Pro His Pro Asn Ile Glu
340 345 350

Glu Val Ala Leu Ser Asn Thr Gly Glu Ile Pro Phe Tyr Gly Lys Ala
355 360 365

Ile Pro Ile Glu Ala Ile Arg Gly Gly Arg His Leu Ile Phe Cys His
370 375 380

Ser Lys Lys Lys Cys Asp Glu Leu Ala Ala Lys Leu Ser Gly Leu Gly
385 390 395 400

Ile Asn Ala Val Ala Tyr Tyr Arg Gly Leu Asp Val Ser Val Ile Pro
405 410 415

Thr Ser Gly Asp Val Val Val Ala Thr Asp Ala Leu Met Thr Gly
420 425 430

Tyr Thr Gly Asp Phe Asp Ser Val Ile Asp Cys Asn Thr Cys Val Thr
435 440 445

Gln Thr Val Asp Phe Ser Leu Asp Pro Thr Phe Thr Ile Glu Thr Thr
450 455 460

Thr Val Pro Gln Asp Ala Val Ser Arg Ser Gln Arg Arg Gly Arg Thr
465 470 475 480

Gly Arg Gly Arg Arg Gly Ile Tyr Arg Phe Val Thr Pro Gly Glu Arg
485 490 495

Pro Ser Gly Met Phe Asp Ser Ser Val Leu Cys Glu Cys Tyr Asp Ala
500 505 510

Gly Cys Ala Trp Tyr Glu Leu Thr Pro Ala Glu Thr Ser Val Arg Leu
515 520 525

Arg Ala Tyr Leu Asn Thr Pro Gly Leu Pro Val Cys Gln Asp His Leu
530 535 540

Glu Phe Trp Glu Ser Val Phe Thr Gly Leu Thr His Ile Asp Ala His

89/198723

245

250

255

Met Ser Lys Ala His Gly Ile Asp Pro Asn Ile Arg Thr Gly Val Arg
260 265 270

Thr Ile Thr Thr Gly Ala Pro Val Thr Tyr Ser Thr Tyr Gly Lys Phe
275 280 285

Leu Ala Asp Gly Gly Cys Ser Gly Gly Ala Tyr Asp Ile Ile Ile Cys
290 295 300

Asp Glu Cys His Ser Thr Asp Ser Thr Thr Ile Leu Gly Ile Gly Thr
305 310 315 320

Val Leu Asp Gln Ala Glu Thr Ala Gly Ala Arg Leu Val Val Leu Ala
325 330 335

Thr Ala Thr Pro Pro Gly Ser Val Thr Val Pro His Pro Asn Ile Glu
340 345 350

Glu Val Ala Leu Ser Asn Thr Gly Glu Ile Pro Phe Tyr Gly Lys Ala
355 360 365

Ile Pro Ile Glu Ala Ile Arg Gly Gly Arg His Leu Ile Phe Cys His
370 375 380

Ser Lys Lys Lys Cys Asp Glu Leu Ala Ala Lys Leu Ser Gly Leu Gly
385 390 395 400

Ile Asn Ala Val Ala Tyr Tyr Arg Gly Leu Asp Val Ser Val Ile Pro
405 410 415

Thr Ile Gly Asp Val Val Val Ala Thr Asp Ala Leu Met Thr Gly
420 425 430

Tyr Thr Gly Asp Phe Asp Ser Val Ile Asp Cys Asn Thr Cys Val Thr
435 440 445

Gln Thr Val Asp Phe Ser Leu Asp Pro Thr Phe Thr Ile Glu Thr Thr
450 455 460

Thr Val Pro Gln Asp Ala Val Ser Arg Ser Gln Arg Arg Gly Arg Thr
465 470 475 480

Gly Arg Gly Arg Arg Gly Ile Tyr Arg Phe Val Thr Pro Gly Glu Arg
485 490 495

Pro Ser Gly Met Phe Asp Ser Ser Val Leu Cys Glu Cys Tyr Asp Ala
500 505 510

Gly Cys Ala Trp Tyr Glu Leu Thr Pro Ala Glu Thr Ser Val Arg Leu
515 520 525

Arg Ala Tyr Leu Asn Thr Pro Gly Leu Pro Val Cys Gln Asp His Leu
530 535 540

Glu Phe Trp Glu Ser Val Phe Thr Gly Leu Thr His Ile Asp Ala His

09/198723

545

550

555

560

Phe Leu Ser Gln Thr Lys Gln Ala Gly Asp Asn Phe Pro Tyr Leu Val
565 570 575

Ala Tyr Gln Ala Thr Val Cys Ala Arg Ala Gln Ala Pro Pro Pro Ser
580 585 590

Trp Asp Gln Met Trp Lys Cys Leu Ile Arg Leu Lys Pro Thr Leu His
595 600 605

Gly Pro Thr Pro Leu Leu Tyr Arg Leu Gly Ala Val Gln Asn Glu Val
610 615 620

Thr Leu Thr His Pro Ile Thr Lys Tyr Ile Met Ala Cys Met Ser Ala
625 630 635 640

Asp Leu Glu Val Val Thr (*
645 650 655

Gly Arg Thr Arg Ala Pro Pro Pro Pro Pro Leu Arg
660 665 670 675 680 685 690 695 700

(2) INFORMATION FOR SEQ ID NO:70:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 65 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

*new seq id no,
1 650 5 655*

ignore

09/198,723

(2) INFORMATION FOR SEQ ID NO:72:

(i) SEQUENCE CHARACTERISTICS: 646 *stems*
(A) LENGTH: 669 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:72:

Met His Met His His His His His Leu Val Pro Arg Gly Ser Ala
1 5 10 15

Pro Ile Thr Ala Tyr Ser Gln Gln Thr Arg Gly Leu Leu Gly Cys Ile
20 25 30

Ile Thr Ser Leu Thr Gly Arg Asp Lys Asn Gln Val Glu Gly Glu Val
35 40 45

Gln Val Val Ser Thr Ala Thr Gln Ser Phe Leu Ala Thr Cys Val Asn
50 55 60

Gly Val Cys Trp Thr Val Tyr His Gly Ala Gly Ser Lys Thr Leu Ala
65 70 75 80

Gly Pro Lys Gly Pro Ile Thr Gln Met Tyr Thr Asn Val Asp Gln Asp
85 90 95

Leu Val Gly Trp Gln Ala Pro Pro Gly Ala Arg Ser Leu Thr Pro Cys
100 105 110

Thr Cys Gly Ser Ser Asp Leu Tyr Leu Val Thr Arg His Ala Asp Val
115 120 125

Ile Pro Val Arg Arg Arg Gly Asp Ser Arg Gly Ser Leu Leu Ser Pro
130 135 140

Arg Pro Val Ser Tyr Leu Lys Gly Ser Ser Gly Gly Pro Leu Leu Cys
145 150 155 160

Pro Ser Gly His Ala Val Gly Ile Phe Arg Ala Ala Val Cys Thr Arg
165 170 175

Gly Val Ala Lys Ala Val Asp Phe Val Pro Val Glu Ser Met Glu Thr
180 185 190

Thr Met Arg Ser Pro Val Phe Thr Asp Asn Ser Ser Pro Pro Ala Val
195 200 205

Pro Gln Ser Phe Gln Val Ala His Leu His Ala Pro Thr Gly Ser Gly
210 215 220

Lys Ser Thr Lys Val Pro Ala Ala Tyr Ala Ala Gln Gly Tyr Lys Val
225 230 235 240

Leu Val Leu Asn Pro Ser Val Ala Ala Thr Leu Gly Phe Gly Ala Tyr

09/198723

545 550 555 560

Phe Leu Ser Gln Thr Lys Gln Ala Gly Asp Asn Phe Pro Tyr Leu Val
565 570 575

Ala Tyr Gln Ala Thr Val Cys Ala Arg Ala Gln Ala Pro Pro Pro Ser
580 585 590

Trp Asp Gln Met Trp Lys Cys Leu Ile Arg Leu Lys Pro Thr Leu His
595 600 605

Gly Pro Thr Pro Leu Leu Tyr Arg Leu Gly Ala Val Gln Asn Glu Val
610 615 620

Thr Leu Thr His Pro Ile Thr Lys Tyr Ile Met Ala Cys Met Ser Ala
625 630 635 640

Asp Leu Glu Val Val Thr (*)

645

↑

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:06:35

INPUT SET: S30248.raw

4176	CTG CTC TCC CCC AGG CCT GTC TCC TAC TTG AAG GGC TCT TCG GGT GGT	528
4177	Leu Leu Ser Pro Arg Pro Val Ser Tyr Leu Lys Gly Ser Ser Gly Gly	
4178	165 170 175	
4179		
4180	CCA CTG CTC TGC CCT TCG GGG CAC GCT GTG GGC ATC TTC CGG GCT GCC	576
4181	Pro Leu Leu Cys Pro Ser Gly His Ala Val Gly Ile Phe Arg Ala Ala	
4182	180 185 190	
4183		
4184	GTA TGC ACC CGG GGG GTT GCG AAG GCG GTG GAC TTT GTG CCC GTA GAG	624
4185	Val Cys Thr Arg Gly Val Ala Lys Ala Val Asp Phe Val Pro Val Glu	
4186	195 200 205	
4187		
4188	TCC ATG GAA ACT ACT ATG CGG TCT TGA	651
4189	Ser Met Glu Thr Thr Met Arg Ser *	
4190	210 215	

(2) INFORMATION FOR SEQ ID NO:93:

insert a hard return

4191

4192 (i) SEQUENCE CHARACTERISTICS:
4193 (A) LENGTH: 651 base pairs
4194 (B) TYPE: nucleic acid
4195 (C) STRANDEDNESS: single
4196 (D) TOPOLOGY: linear
4197
4198 (ii) MOLECULE TYPE: DNA (genomic

(delete all
format markers)
(e.g., hard page break
codes)

--> 4207 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:93:

4208 ATG GGC AGC AGC CAT CAT CAT CA

--> 4207 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:93:
 4208
 4209 ATG GGC AGC AGC CAT CAT CAT CAT CAC AGC AGC GGC CTG GTG CCG 48
 4210 Met Gly Ser Ser His His His His His Ser Ser Gly Leu Val Pro
 4211 1 5 10 15
 4212
 4213 CGC GGC AGC CAT ATG GGT TCT GTT ATT GTT GGT AGA ATT ATT TTA 96
 4214 Arg Gly Ser His Met Gly Ser Val Val Ile Val Gly Arg Ile Ile Leu
 4215 20 25 30
 4216
 4217 TCT GGT AGT GGT AGT ATC ACG GCC TAC TCC CAA CAG ACG CGG GGC CTA 144
 4218 Ser Gly Ser Gly Ser Ile Thr Ala Tyr Ser Gln Gln Thr Arg Gly Leu
 4219 35 40 45
 4220
 4221 CTT GGT TGC AAG ATC ACT AGC CTT ACA GGC CGG GAC AAG AAC CAG GTC 192
 4222 Leu Gly Cys Lys Ile Thr Ser Leu Thr Gly Arg Asp Lys Asn Gln Val
 4223 50 55 60
 4224
 4225 GAG GGA GAG GTT CAG GTG GTT TCC ACC GCA ACA CAA TCC TTC CTG GCG 240
 4226 Glu Gly Glu Val Gln Val Val Ser Thr Ala Thr Gln Ser Phe Leu Ala
 4227 65 70 75 80
 4228

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:06:36

INPUT SET: S30248.raw

4229	ACC TGC GTC AAC GGC GTG TGT TGG ACC GTT TAC CAT GGT GCT GGC TCA	288
4230	Thr Cys Val Asn Gly Val Cys Trp Thr Val Tyr His Gly Ala Gly Ser	
4231	85	90
4232		95
4233	AAG ACC TTA GCC GGC CCA AAG GGG CCA ATC ACC CAG ATG TAC ACT AAT	336
4234	Lys Thr Leu Ala Gly Pro Lys Gly Pro Ile Thr Gln Met Tyr Thr Asn	
4235	100	105
4236		110
4237	G TG GAC CAG GAC CTC GTC GGC TGG CAG GCG CCC CCC GGG GCG CGT TCC	384
4238	Val Asp Gln Asp Leu Val Gly Trp Gln Ala Pro Pro Gly Ala Arg Ser	
4239	115	120
4240		125
4241	TTG ACA CCA TGC ACC TGT GGC AGC TCA GAC CTT TAC TTG GTC ACG AGA	432
4242	Leu Thr Pro Cys Thr Cys Gly Ser Ser Asp Leu Tyr Leu Val Thr Arg	
4243	130	135
4244		140
4245	CAT GCT GAC GTC ATT CCG GTG CGC CGG CGG GGC GAC AGT AGG GGG AGC	480
4246	His Ala Asp Val Ile Pro Val Arg Arg Arg Gly Asp Ser Arg Gly Ser	
4247	145	150
4248		155
4249	CAT GCT GAC GTC ATT CCG GTG CGC CGG CGG GGC GAC AGT AGG GGG AGC	528
4250	His Ala Asp Val Ile Pro Val Arg Arg Arg Gly Asp Ser Arg Gly Ser	
4251	165	170
4252		175
4253	CTG CTC TCC CCC AGG CCT GTC TCC TAC TTG AAG GGC TCT TCG GGT GGT	576
4254	Leu Leu Ser Pro Arg Pro Val Ser Tyr Leu Lys Gly Ser Ser Gly Gly	
4255	180	185
4256		190
4257	CCA CTG CTC TGC CCT TCG GGG CAC GCT GTG GGC ATC TTC CGG GCT GCC	624
4258	Pro Leu Leu Cys Pro Ser Gly His Ala Val Gly Ile Phe Arg Ala Ala	
4259	195	200
4260		205
4261	TCC ATG GAA ACT ACT ATG CGG TCT TGA	651
4262	Ser Met Glu Thr Thr Met Arg Ser *	
4263	210	215
4264	<i>hard return</i>	
4265	(2) INFORMATION FOR SEQ ID NO:94:	
4266	(i) SEQUENCE CHARACTERISTICS:	
4267	(A) LENGTH: 651 base pairs	
4268	(B) TYPE: nucleic acid	
4269	(C) STRANDEDNESS: single	
4270	(D) TOPOLOGY: linear	
4271	(ii) MOLECULE TYPE: DNA (genomic)	
4272		
4273		
4274	(ix) FEATURE:	
4275	(A) NAME/KEY: CDS	
4276	(B) LOCATION: 1..651	
4277		
4278		
4279	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:94:	
4280		
4281	ATG GGC AGC AGC CAT CAT CAT CAT CAC AGC AGC GGC CTG GTG CCG	

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:06:37

INPUT SET: S30248.raw

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723

DATE: 12/09/98
 TIME: 16:06:38

K INPUT SET: S30248.raw

4335 210 215 (2) INFORMATION FOR SEQ ID NO:95:

4336
 4337 (i) SEQUENCE CHARACTERISTICS:
 4338 (A) LENGTH: 651 base pairs
 4339 (B) TYPE: nucleic acid
 4340 (C) STRANDEDNESS: single
 4341 (D) TOPOLOGY: linear

4342
 4343 (ii) MOLECULE TYPE: DNA (genomic)

4344
 4345
 4346 (ix) FEATURE:
 4347 (A) NAME/KEY: CDS
 4348 (B) LOCATION: 1..651

4349
 4350
 --> 4351 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:95:

4352	ATG GGC AGC AGC CAT CAT CAT CAT CAC AGC AGC GGC CTG GTG CCG	48
4353	Met Gly Ser Ser His His His His His Ser Ser Gly Leu Val Pro	
4354	1 5 10 15	
4355		
4356	CGC GGC AGC CAT ATG GGT TCT GTT ATT GTT GGT AGA ATT ATT TTA	96
4357	Arg Gly Ser His Met Gly Ser Val Val Ile Val Gly Arg Ile Ile Leu	
4358	20 25 30	
4359		
4360	TCT GGT AGT GGT AGT ATC ACG GCC TAC TCC CAA CAG ACG CGG GGC CTA	144
4361	Ser Gly Ser Gly Ser Ile Thr Ala Tyr Ser Gln Gln Thr Arg Gly Leu	
4362	35 40 45	
4363		
4364	CTT GGT TGC AAG AAG ACT AGC CTT ACA GGC CGG GAC AAG AAC CAG GTC	192
4365	Leu Gly Cys Lys Lys Thr Ser Leu Thr Gly Arg Asp Lys Asn Gln Val	
4366	50 55 60	
4367		
4368	GAG GGA GAG GTT CAG GTG GTT TCC ACC GCA ACA CAA TCC TTC CTG GCG	240
4369	Glu Gly Glu Val Gln Val Val Ser Thr Ala Thr Gln Ser Phe Leu Ala	
4370	65 70 75 80	
4371		
4372	ACC TGC GTC AAC GGC GTG TGT TGG ACC GTT TAC CAT GGT GCT GGC TCA	288
4373	Thr Cys Val Asn Gly Val Cys Trp Thr Val Tyr His Gly Ala Gly Ser	
4374	85 90 95	
4375		
4376	AAG ACC TTA GCC GGC CCA AAG GGG CCA ATC ACC CAG ATG TAC ACT AAT	336
4377	Lys Thr Leu Ala Gly Pro Lys Gly Pro Ile Thr Gln Met Tyr Thr Asn	
4378	100 105 110	
4379		
4380	GTG GAC CAG GAC CTC GTC GGC TGG CAG GCG CCC CCC GGG GCG CGT TCC	384
4381	Val Asp Gln Asp Leu Val Gly Trp Gln Ala Pro Pro Gly Ala Arg Ser	
4382	115 120 125	
4383		
4384	TTG ACA CCA TGC ACC TGT GGC AGC TCA GAC CTT TAC TTG GTC ACG AGA	432
4385	Leu Thr Pro Cys Thr Cys Gly Ser Ser Asp Leu Tyr Leu Val Thr Arg	
4386	130 135 140	
4387		

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:06:38

INPUT SET: S30248.raw

4388	CAT GCT GAC GTC ATT CCG GTG CGC CGG CGG GGC GAC AGT AGG GGG AGC	480
4389	His Ala Asp Val Ile Pro Val Arg Arg Arg Gly Asp Ser Arg Gly Ser	
4390	145 150 155 160	
4392	CTG CTC TCC CCC AGG CCT GTC TCC TAC TTG AAG GGC TCT TCG GGT GGT	528
4393	Leu Leu Ser Pro Arg Pro Val Ser Tyr Leu Lys Gly Ser Ser Gly Gly	
4394	165 170 175	
4395	CCA CTG CTC CCT TCG GGG CAC GCT GTG GGC ATC TTC CGG GCT GCC	576
4396	Pro Leu Leu Cys Pro Ser Gly His Ala Val Gly Ile Phe Arg Ala Ala	
4397	180 185 190	
4400	GTA TGC ACC CGG GGG GTT GCG AAG GCG GTG GAC TTT GTG CCC GTA GAG	624
4401	Val Cys Thr Arg Gly Val Ala Lys Ala Val Asp Phe Val Pro Val Glu	
4402	195 200 205	
4404	TCC ATG GAA ACT ACT ATG CGG TCT TGA	651
4405	Ser Met Glu Thr Thr Met Arg Ser *	
4406	210 215	
4407	(2) INFORMATION FOR SEQ ID NO:96:	

4408
 4409 (i) SEQUENCE CHARACTERISTICS:
 4410 (A) LENGTH: 650 base pairs
 4411 (B) TYPE: nucleic acid
 4412 (C) STRANDEDNESS: single
 4413 (D) TOPOLOGY: linear

4414
 4415 (ii) MOLECULE TYPE: cDNA

4416
 4417
 4418
 4419 (ix) FEATURE:
 4420 (A) NAME/KEY: CDS
 4421 (B) LOCATION: 1..650

--> 4424 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:96:

4425	ATG GGC AGC AGC CAT CAT CAT CAT CAC AGC AGC GGC CTG GTG CCG	48
4426	Met Gly Ser Ser His His His His His His Ser Ser Gly Leu Val Pro	
4427	1 5 10 15	
4428	4429	
4430	CGC GGC AGC CAT ATG GGT TCT GTT ATT GTT GGT AGA ATT ATT TTA	96
4431	Arg Gly Ser His Met Gly Ser Val Val Ile Val Gly Arg Ile Ile Leu	
4432	20 25 30	
4433	4434 TCT GGT AGT GGT ATC ACG GCC TAC TCC CAA CAG ACG CGG GGC CTA	144
4435	Ser Gly Ser Gly Ser Ile Thr Ala Tyr Ser Gln Gln Thr Arg Gly Leu	
4436	35 40 45	
4437	4438 CTT GGT TGC ATC ATC ACT AGC CTT ACA GGC CGG GAC AAG AAC CAG GTC	192
4439	Leu Gly Cys Ile Ile Thr Ser Leu Thr Gly Arg Asp Lys Asn Gln Val	
4440	50 55 60	

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:06:39

INPUT SET: S30248.raw

4441
 4442 GAG GGA GAG GTT CAG GTG GTT TCC ACC GCA ACA CAA TCC TTC CTG GCG 240
 4443 Glu Gly Glu Val Gln Val Val Ser Thr Ala Thr Gln Ser Phe Leu Ala
 4444 65 70 75 80
 4445
 4446 ACC TGC GTC AAC GCC GTG TGT TGG ACC GTT TAC CAT GGT GCT GGC TCA 288
 4447 Thr Cys Val Asn Gly Val Cys Trp Thr Val Tyr His Gly Ala Gly Ser
 4448 85 90 95
 4449
 4450 AAG ACC TTA GCC GGC CCA AAG GGG CCA ATC ACC CAG ATG TAC ACT AAT 336
 4451 Lys Thr Leu Ala Gly Pro Lys Gly Pro Ile Thr Gln Met Tyr Thr Asn
 4452 100 105 110
 4453
 4454 GTG GAC CAG GAC CTC GTC GGC TGG CAG GCG CCC CCC GGG GCG CGT TCC 384
 4455 Val Asp Gln Asp Leu Val Gly Trp Gln Ala Pro Pro Gly Ala Arg Ser
 4456 115 120 125
 4457
 4458 TTG ACA CCA TGC ACC TGT GGC AGC TCA GAC CTT TAC TTG GTC ACG AGA 432
 4459 Leu Thr Pro Cys Thr Cys Gly Ser Ser Asp Leu Tyr Leu Val Thr Arg
 4460 130 135 140
 4461
 4462 CAT GCT GAC GTC ATT CCG GTG CGC CGG CGG GGC GAC AGT AGG GGG AGC 480
 4463 His Ala Asp Val Ile Pro Val Arg Arg Arg Gly Asp Ser Arg Gly Ser
 4464 145 150 155 160
 4465
 4466 CTG CTC TCC CCC AGG CCT GTC TCC TAC TTG AAG GGC TCT GCT GGT GGT 528
 4467 Leu Leu Ser Pro Arg Pro Val Ser Tyr Leu Lys Gly Ser Ala Gly Gly
 4468 165 170 175
 4469
 4470 CCA CTG CTC TGC CCT TCG GGG CAC GCT GTG GGC ATC TTC CGG GCT GCC 576
 4471 Pro Leu Leu Cys Pro Ser Gly His Ala Val Gly Ile Phe Arg Ala Ala
 4472 180 185 190
 4473
 4474 GTA TGC ACC CGG GGG GTT GCG AAG GCG GTG GAC TTT GTG CCC GTA GAG 624
 4475 Val Cys Thr Arg Gly Val Ala Lys Ala Val Asp Phe Val Pro Val Glu
 4476 195 200 205
 4477
 4478 TCC ATG GAA ACT ACT ATG CGG TCT TG
 4479 Ser Met Glu Thr Thr Met Arg Ser
 4480 210 215 (2) INFORMATION FOR SEQ ID NO:97:
 4481
 4482 (i) SEQUENCE CHARACTERISTICS:
 4483 (A) LENGTH: 650 base pairs
 4484 (B) TYPE: nucleic acid
 4485 (C) STRANDEDNESS: single
 4486 (D) TOPOLOGY: linear
 4487
 4488 (ii) MOLECULE TYPE: cDNA
 4489
 4490
 4491 (ix) FEATURE:
 4492 (A) NAME/KEY: CDS
 4493 (B) LOCATION: 1..650

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723

DATE: 12/09/98
 TIME: 16:06:40

INPUT SET: S30248.raw

4494																	
4495																	
--> 4496	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:97:																
4497																	
4498	ATG	GGC	AGC	AGC	CAT	CAT	CAT	CAT	CAC	AGC	AGC	GGC	CTG	GTG	CCG	48	
4499	Met	Gly	Ser	Ser	His	His	His	His	His	His	Ser	Ser	Gly	Leu	Val	Pro	
4500	1		5						10					15			
4501																	
4502	CGC	GGC	AGC	CAT	ATG	GGT	TCT	GTT	ATT	GTT	GGT	AGA	ATT	ATT	TTA	96	
4503	Arg	Gly	Ser	His	Met	Gly	Ser	Val	Val	Ile	Val	Gly	Arg	Ile	Ile	Leu	
4504									20		25			30			
4505																	
4506	TCT	GGT	AGT	GGT	AGT	ATC	ACG	GCC	TAC	TCC	CAA	CAG	ACG	CGG	GGC	CTA	144
4507	Ser	Gly	Ser	Gly	Ser	Ile	Thr	Ala	Tyr	Ser	Gln	Gln	Thr	Arg	Gly	Leu	
4508									35		40			45			
4509																	
4510	CTT	GGT	TGC	AAG	ATC	ACT	AGC	CTT	ACA	GGC	CGG	GAC	AAG	AAC	CAG	GTC	192
4511	Leu	Gly	Cys	Lys	Ile	Thr	Ser	Leu	Thr	Gly	Arg	Asp	Lys	Asn	Gln	Val	
4512									50		55			60			
4513																	
4514	GAG	GGA	GAG	GTT	CAG	GTG	GTT	TCC	ACC	GCA	ACA	CAA	TCC	TTC	CTG	GCG	240
4515	Glu	Gly	Glu	Val	Gln	Val	Val	Ser	Thr	Ala	Thr	Gln	Ser	Phe	Leu	Ala	
4516									65		70			75		80	
4517																	
4518	ACC	TGC	GTC	AAC	GGC	GTG	TGT	TGG	ACC	GTT	TAC	CAT	GGT	GCT	GGC	TCA	288
4519	Thr	Cys	Val	Asn	Gly	Val	Cys	Trp	Thr	Val	Tyr	His	Gly	Ala	Gly	Ser	
4520									85		90			95			
4521																	
4522	AAG	ACC	TTA	GCC	GGC	CCA	AAG	GGG	CCA	ATC	ACC	CAG	ATG	TAC	ACT	AAT	336
4523	Lys	Thr	Leu	Ala	Gly	Pro	Lys	Gly	Pro	Ile	Thr	Gln	Met	Tyr	Thr	Asn	
4524									100		105			110			
4525																	
4526	GTG	GAC	CAG	GAC	CTC	GTC	GGC	TGG	CAG	GGC	CCC	CCC	GGG	GGC	CGT	TCC	384
4527	Val	Asp	Gln	Asp	Leu	Val	Gly	Trp	Gln	Ala	Pro	Pro	Gly	Ala	Arg	Ser	
4528									115		120			125			
4529																	
4530	TTG	ACA	CCA	TGC	ACC	TGT	GGC	AGC	TCA	GAC	CTT	TAC	TTG	GTC	ACG	AGA	432
4531	Leu	Thr	Pro	Cys	Thr	Cys	Gly	Ser	Ser	Asp	Leu	Tyr	Leu	Val	Thr	Arg	
4532									130		135			140			
4533																	
4534	CAT	GCT	GAC	GTC	ATT	CCG	GTG	CGC	CGG	CGG	GGC	GAC	AGT	AGG	GGG	AGC	480
4535	His	Ala	Asp	Val	Ile	Pro	Val	Arg	Arg	Arg	Gly	Asp	Ser	Arg	Gly	Ser	
4536									145		150			155		160	
4537																	
4538	CTG	CTC	TCC	CCC	AGG	CCT	GTC	TCC	TAC	TTG	AAG	GGC	TCT	GCT	GGT	GGT	528
4539	Leu	Leu	Ser	Pro	Arg	Pro	Val	Ser	Tyr	Leu	Lys	Gly	Ser	Ala	Gly	Gly	
4540									165		170			175			
4541																	
4542	CCA	CTG	CTC	TGC	CCT	TCG	GGG	CAC	GCT	GTG	GGC	ATC	TTC	CGG	GCT	GCC	576
4543	Pro	Leu	Leu	Cys	Pro	Ser	Gly	His	Ala	Val	Gly	Ile	Phe	Arg	Ala	Ala	
4544									180		185			190			
4545																	
4546	GTA	TGC	ACC	CGG	GGG	GTT	GCG	AAG	GCG	GTG	GAC	TTT	GTG	CCC	GTA	GAG	624

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:06:40

INPUT SET: S30248.raw

4547	Val Cys Thr Arg Gly Val Ala Lys Ala Val Asp Phe Val Pro Val Glu	
4548	195	200
4549		205
4550	TCC ATG GAA ACT ACT ATG CGG TCT TG	650
4551	Ser Met Glu Thr Thr Met Arg Ser	<i>(2)</i>
4552	210	215
4553	(2) INFORMATION FOR SEQ ID NO:98:	
4554	(i) SEQUENCE CHARACTERISTICS:	
4555	(A) LENGTH: 651 base pairs	
4556	(B) TYPE: nucleic acid	
4557	(C) STRANDEDNESS: single	
4558	(D) TOPOLOGY: linear	
4559		
4560	(ii) MOLECULE TYPE: cDNA	
4561		
4562		
4563	(ix) FEATURE:	
4564	(A) NAME/KEY: CDS	
4565	(B) LOCATION: 1..651	
4566		
4567		
4568	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:98:	
4569		
4570	ATG GGC AGC AGC CAT CAT CAT CAT CAC AGC AGC GGC CTG GTG CCG	48
4571	Met Gly Ser Ser His His His His His Ser Ser Gly Leu Val Pro	
4572	1	5
4573	10	15
4574	CGC GGC AGC CAT ATG GGT TCT GTT ATT GTT GGT AGA ATT ATT TTA	96
4575	Arg Gly Ser His Met Gly Ser Val Val Ile Val Gly Arg Ile Ile Leu	
4576	20	25
4577	30	
4578	TCT GGT AGT GGT ATC ACG GCC TAC TCC CAA CAG ACG CGG GGC CTA	144
4579	Ser Gly Ser Gly Ser Ile Thr Ala Tyr Ser Gln Gln Thr Arg Gly Leu	
4580	35	40
4581	45	
4582	CTT GGT TGC ATC AAG ACT AGC CTT ACA GGC CGG GAC AAG AAC CAG GTC	192
4583	Leu Gly Cys Ile Lys Thr Ser Leu Thr Gly Arg Asp Lys Asn Gln Val	
4584	50	55
4585	60	
4586	GAG GGA GAG GTT CAG GTG GTT TCC ACC GCA ACA CAA TCC TTC CTG GCG	240
4587	Glu Gly Val Gln Val Val Ser Thr Ala Thr Gln Ser Phe Leu Ala	
4588	65	70
4589	75	80
4590	GAG GGA GAG GTT CAG GTG GTT TCC ACC GCA ACA CAA TCC TTC CTG GCG	288
4591	Thr Cys Val Asn Gly Val Cys Trp Thr Val Tyr His Gly Ala Gly Ser	
4592	85	90
4593	95	
4594	AAG ACC TTA GCC GGC CCA AAG GGG CCA ATC ACC CAG ATG TAC ACT AAT	336
4595	Lys Thr Leu Ala Gly Pro Lys Gly Pro Ile Thr Gln Met Tyr Thr Asn	
4596	100	105
4597	110	
4598	GTG GAC CAG GAC CTC GTC GGC TGG CAG GCG CCC CCC GGG GCG CGT TCC	384
4599	Val Asp Gln Asp Leu Val Gly Trp Gln Ala Pro Pro Gly Ala Arg Ser	

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**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:06:41

INPUT SET: S30248.raw

4600	115	120	125	
4601				
4602	TTG ACA CCA TGC ACC TGT GGC AGC TCA GAC CTT TAC TTG GTC ACG AGA			432
4603	Leu Thr Pro Cys Thr Cys Gly Ser Ser Asp Leu Tyr Leu Val Thr Arg			
4604	130	135	140	
4605				
4606	CAT GCT GAC GTC ATT CCG GTG CGC CGG CGG GGC GAC AGT AGG GGG AGC			480
4607	His Ala Asp Val Ile Pro Val Arg Arg Arg Gly Asp Ser Arg Gly Ser			
4608	145	150	155	160
4609				
4610	CTG CTC TCC CCC AGG CCT GTC TCC TAC TTG AAG GGC TCT GCT GGT GGT			528
4611	Leu Leu Ser Pro Arg Pro Val Ser Tyr Leu Lys Gly Ser Ala Gly Gly			
4612	165	170	175	
4613				
4614	CCA CTG CTC TGC CCT TCG GGG CAC GCT GTG GGC ATC TTC CGG GCT GCC			576
4615	Pro Leu Leu Cys Pro Ser Gly His Ala Val Gly Ile Phe Arg Ala Ala			
4616	180	185	190	
4617				
4618	GTA TGC ACC CGG GGG GTT GCG AAG GCG GTG GAC TTT GTG CCC GTA GAG			624
4619	Val Cys Thr Arg Gly Val Ala Lys Ala Val Asp Phe Val Pro Val Glu			
4620	195	200	205	
4621				
4622	TCC ATG GAA ACT ACT ATG CGG TCT TGA			651
4623	Ser Met Glu Thr Thr Met Arg Ser *			
4624	210	215	(2) INFORMATION FOR SEQ ID NO:99:	
4625				
4626	(i) SEQUENCE CHARACTERISTICS:			
4627	(A) LENGTH: 651 base pairs			
4628	(B) TYPE: nucleic acid			
4629	(C) STRANDEDNESS: single			
4630	(D) TOPOLOGY: linear			
4631				
4632	(ii) MOLECULE TYPE: cDNA			
4633				
4634				
4635	(ix) FEATURE:			
4636	(A) NAME/KEY: CDS			
4637	(B) LOCATION: 1..651			
4638				
4639				
--> 4640	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:99:			
4641				
4642	ATG GGC AGC AGC CAT CAT CAT CAT CAT CAC AGC AGC GGC CTG GTG CCG			48
4643	Met Gly Ser Ser His His His His His His Ser Ser Gly Leu Val Pro			
4644	1	5	10	15
4645				
4646	CGC GGC AGC CAT ATG GGT TCT GTT ATT GTT GGT AGA ATT ATT TTA			96
4647	Arg Gly Ser His Met Gly Ser Val Val Ile Val Gly Arg Ile Ile Leu			
4648	20	25	30	
4649				
4650	TCT GGT AGT GGT AGT ATC ACG GCC TAC TCC CAA CAG ACG CGG GGC CTA			144
4651	Ser Gly Ser Gly Ser Ile Thr Ala Tyr Ser Gln Gln Thr Arg Gly Leu			
4652	35	40	45	

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:06:42

INPUT SET: S30248.raw

4653				
4654	CTT GGT TGC AAG AAG ACT AGC CTT ACA GGC CGG GAC AAG AAC CAG GTC			192
4655	Leu Gly Cys Lys Lys Thr Ser Leu Thr Gly Arg Asp Lys Asn Gln Val			
4656	50	55	60	
4657				
4658	GAG GGA GAG GTT CAG GTG GTT TCC ACC GCA ACA CAA TCC TTC CTG GCG			240
4659	Glu Gly Glu Val Gln Val Val Ser Thr Ala Thr Gln Ser Phe Leu Ala			
4660	65	70	75	80
4661				
4662	ACC TGC GTC AAC GGC GTG TGT TGG ACC GTT TAC CAT GGT GCT GGC TCA			288
4663	Thr Cys Val Asn Gly Val Cys Trp Thr Val Tyr His Gly Ala Gly Ser			
4664	85	90	95	
4665				
4666	AAG ACC TTA GCC GGC CCA AAG GGG CCA ATC ACC CAG ATG TAC ACT AAT			336
4667	Lys Thr Leu Ala Gly Pro Lys Gly Pro Ile Thr Gln Met Tyr Thr Asn			
4668	100	105	110	
4669				
4670	GTG GAC CAG GAC CTC GTC GGC TGG CAG GCG CCC CCC GGG GCG CGT TCC			384
4671	Val Asp Gln Asp Leu Val Gly Trp Gln Ala Pro Pro Gly Ala Arg Ser			
4672	115	120	125	
4673				
4674	TTG ACA CCA TGC ACC TGT GGC AGC TCA GAC CTT TAC TTG GTC ACG AGA			432
4675	Leu Thr Pro Cys Thr Cys Gly Ser Ser Asp Leu Tyr Leu Val Thr Arg			
4676	130	135	140	
4677				
4678	CAT GCT GAC GTC ATT CCG GTG CGC CGG CGG GGC GAC AGT AGG GGG AGC			480
4679	His Ala Asp Val Ile Pro Val Arg Arg Arg Gly Asp Ser Arg Gly Ser			
4680	145	150	155	160
4681				
4682	CTG CTC TCC CCC AGG CCT GTC TCC TAC TTG AAG GGC TCT GCT GGT GGT			528
4683	Leu Leu Ser Pro Arg Pro Val Ser Tyr Leu Lys Gly Ser Ala Gly Gly			
4684	165	170	175	
4685				
4686	CCA CTG CTC TGC CCT TCG GGG CAC GCT GTG GGC ATC TTC CGG GCT GCC			576
4687	Pro Leu Leu Cys Pro Ser Gly His Ala Val Gly Ile Phe Arg Ala Ala			
4688	180	185	190	
4689				
4690	GTA TGC ACC CGG GGG GTT GCG AAG GCG GTG GAC TTT GTG CCC GTA GAG			624
4691	Val Cys Thr Arg Gly Val Ala Lys Ala Val Asp Phe Val Pro Val Glu			
4692	195	200	205	
4693				
4694	TCC ATG GAA ACT ACT ATG CGG TCT TGA			651
4695	Ser Met Glu Thr Thr Met Arg Ser *			
4696	210	215	(2) INFORMATION FOR SEQ ID NO:100:	
4697				
4698	(i) SEQUENCE CHARACTERISTICS:			
4699	(A) LENGTH: 651 base pairs			
4700	(B) TYPE: nucleic acid			
4701	(C) STRANDEDNESS: single			
4702	(D) TOPOLOGY: linear			
4703				
4704	(ii) MOLECULE TYPE: cDNA			
4705				

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:06:42

INPUT SET: S30248.raw

4706	(ix) FEATURE:	100 (use numeral 0, not upper-case)
4707	(A) NAME/KEY: CDS	
4708	(B) LOCATION: 1..651	
4709	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:100:	
4710		
4711		
4712	ATG GGC AGC AGC CAT CAT CAT CAT CAC AGC AGC GGC CTG GTG CCG	48
4713	Met Gly Ser Ser His His His His His Ser Ser Gly Leu Val Pro	
4714	1 5 10 15	
4715		
4716	CGC GGC AGC CAT ATG GGT TCT GTT ATT GTT GGT AGA ATT ATT TTA	96
4717	Arg Gly Ser His Met Gly Ser Val Val Ile Val Gly Arg Ile Ile Leu	
4718	20 25 30	
4719		
4720	TCT CCT GCT GGT GGT ATC ACG GCC TAC TCC CAA CAG ACG CGG GGC CTA	144
4721	Ser Pro Ala Gly Gly Ile Thr Ala Tyr Ser Gln Gln Thr Arg Gly Leu	
4722	35 40 45	
4723		
4724	CTT GGT TGC ATC ATC ACT AGC CTT ACA GGC CGG GAC AAG AAC CAG GTC	192
4725	Leu Gly Cys Ile Ile Thr Ser Leu Thr Gly Arg Asp Lys Asn Gln Val	
4726	50 55 60	
4727		
4728	GAG GGA GAG GTT CAG GTG GTT TCC ACC GCA ACA CAA TCC TTC CTG GCG	240
4729	Glu Gly Glu Val Gln Val Val Ser Thr Ala Thr Gln Ser Phe Leu Ala	
4730	65 70 75 80	
4731		
4732	ACC TGC GTC AAC GGC GTG TGT TGG ACC GTT TAC CAT GGT GCT GGC TCA	288
4733	Thr Cys Val Asn Gly Val Cys Trp Thr Val Tyr His Gly Ala Gly Ser	
4734	85 90 95	
4735		
4736	AAG ACC TTA GCC GGC CCA AAG GGG CCA ATC ACC CAG ATG TAC ACT AAT	336
4737	Lys Thr Leu Ala Gly Pro Lys Gly Pro Ile Thr Gln Met Tyr Thr Asn	
4738	100 105 110	
4739		
4740	GTG GAC CAG GAC CTC GTC GGC TGG CAG GCG CCC CCC GGG GCG CGT TCC	384
4741	Val Asp Gln Asp Leu Val Gly Trp Gln Ala Pro Pro Gly Ala Arg Ser	
4742	115 120 125	
4743		
4744	TTG ACA CCA TGC ACC TGT GGC AGC TCA GAC CTT TAC TTG GTC ACG AGA	432
4745	Leu Thr Pro Cys Thr Cys Gly Ser Ser Asp Leu Tyr Leu Val Thr Arg	
4746	130 135 140	
4747		
4748	CAT GCT GAC GTC ATT CCG GTG CGC CGG CGG GGC GAC AGT AGG GGG AGC	480
4749	His Ala Asp Val Ile Pro Val Arg Arg Arg Gly Asp Ser Arg Gly Ser	
4750	145 150 155 160	
4751		
4752	CTG CTC TCC CCC AGG CCT GTC TCC TAC TTG AAG GGC TCT TCG GGT GGT	528
4753	Leu Leu Ser Pro Arg Pro Val Ser Tyr Leu Lys Gly Ser Ser Gly Gly	
4754	165 170 175	
4755		
4756	CCA CTG CTC TGC CCT TCG GGG CAC GCT GTG GGC ATC TTC CGG GCT GCC	576
4757	Pro Leu Leu Cys Pro Ser Gly His Ala Val Gly Ile Phe Arg Ala Ala	
4758	180 185 190	

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:06:43

INPUT SET: S30248.raw

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4759
4760  GTA TGC ACC CGG GGG GTT GCG AAG GCG GTG GAC TTT GTG CCC GTA GAG      624
4761  Val Cys Thr Arg Gly Val Ala Lys Ala Val Asp Phe Val Pro Val Glu
4762          195           200           205
4763
4764  TCC ATG GAA ACT ACT ATG CGG TCT TGA      651
4765  Ser Met Glu Thr Thr Met Arg Ser *C
4766  210           215
4767          (2) INFORMATION FOR SEQ ID NO:101:
4768          (i) SEQUENCE CHARACTERISTICS:
4769            (A) LENGTH: 651 base pairs
4770            (B) TYPE: nucleic acid
4771            (C) STRANDEDNESS: single
4772            (D) TOPOLOGY: linear
4773
4774          (ii) MOLECULE TYPE: cDNA
4775
4776
4777          (ix) FEATURE:
4778            (A) NAME/KEY: CDS
4779            (B) LOCATION: 1..651
4780
4781
--> 4782          (xi) SEQUENCE DESCRIPTION: SEQ ID NO:101:
4783
4784  ATG GGC AGC AGC CAT CAT CAT CAT CAC AGC AGC GGC CTG GTG CCG      48
4785  Met Gly Ser Ser His His His His His Ser Ser Gly Leu Val Pro
4786  1           5           10           15
4787
4788  CGC GGC AGC CAT ATG GGT TCT GTT ATT GTT GGT AGA ATT ATT TTA      96
4789  Arg Gly Ser His Met Gly Ser Val Val Ile Val Gly Arg Ile Ile Leu
4790  20          25          30
4791
4792  TCT CCT GCT GGT GGT ATC ACG GCC TAC TCC CAA CAG ACG CGG GGC CTA      144
4793  Ser Pro Ala Gly Gly Ile Thr Ala Tyr Ser Gln Gln Thr Arg Gly Leu
4794  35          40          45
4795
4796  CTT GGT TGC AAG ATC ACT AGC CTT ACA GGC CGG GAC AAG AAC CAG GTC      192
4797  Leu Gly Cys Lys Ile Thr Ser Leu Thr Gly Arg Asp Lys Asn Gln Val
4798  50          55          60
4799
4800  GAG GGA GAG GTT CAG GTG GTT TCC ACC GCA ACA CAA TCC TTC CTG GCG      240
4801  Glu Gly Glu Val Gln Val Val Ser Thr Ala Thr Gln Ser Phe Leu Ala
4802  65          70          75          80
4803
4804  ACC TGC GTC AAC GGC GTG TGT TGG ACC GTT TAC CAT GGT GCT GGC TCA      288
4805  Thr Cys Val Asn Gly Val Cys Trp Thr Val Tyr His Gly Ala Gly Ser
4806  85          90          95
4807
4808  AAG ACC TTA GCC GGC CCA AAG GGG CCA ATC ACC CAG ATG TAC ACT AAT      336
4809  Lys Thr Leu Ala Gly Pro Lys Gly Pro Ile Thr Gln Met Tyr Thr Asn
4810  100         105         110
4811

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RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723

DATE: 12/09/98
 TIME: 16:06:47

Chang Sun
INPUT SET: S30248.raw

5023 Cys Met Ser Ala Asp Leu Glu Val Val 660 665 (2) INFORMATION FOR SEQ ID NO:103:

5025

5026 (i) SEQUENCE CHARACTERISTICS:

- 5027 (A) LENGTH: 1998 base pairs
- 5028 (B) TYPE: nucleic acid
- 5029 (C) STRANDEDNESS: single
- 5030 (D) TOPOLOGY: linear

5031

5032 (ii) MOLECULE TYPE: cDNA

5033

5034

5035 (ix) FEATURE:

- 5036 (A) NAME/KEY: CDS
- 5037 (B) LOCATION: 1..1997

5038

5039 (ix) FEATURE:

- 5040 (A) NAME/KEY: CDS
- 5041 (B) LOCATION: 1..1995

5042

5043

--> 5044 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:103:

5045

5046 ATG GGC AGC AGC CAT CAT CAT CAT CAC AGC AGC GGC CTG GTG CCG	48
5047 Met Gly Ser Ser His His His His His Ser Ser Gly Leu Val Pro	
5048 1 5 10 15	

5049

5050 CGC GGC AGC CAT ATG GGT TCT GTT ATT GTT GGT AGA ATT ATT TTA	96
5051 Arg Gly Ser His Met Gly Ser Val Val Ile Val Gly Arg Ile Ile Leu	
5052 20 25 30	

5053

5054 TCT GGT AGT GGT ATC ACG GCC TAC TCC CAA CAG ACG CGG GGC CTA	144
5055 Ser Gly Ser Gly Ser Ile Thr Ala Tyr Ser Gln Gln Thr Arg Gly Leu	
5056 35 40 45	

5057

5058 CTT GGT TGC AAG ATC ACT ACG CTT ACA GGC CGG GAC AAG AAC CAG GTC	192
5059 Leu Gly Cys Lys Ile Thr Ser Leu Thr Gly Arg Asp Lys Asn Gln Val	
5060 50 55 60	

5061

5062 GAG GGA GAG GTT CAG GTG GTT TCC ACC GCA ACA CAA TCC TTC CTG GCG	240
5063 Glu Gly Glu Val Gln Val Val Ser Thr Ala Thr Gln Ser Phe Leu Ala	
5064 65 70 75 80	

5065

5066 ACC TGC GTC AAC GGC GTG TGT TGG ACC GTT TAC CAT GGT GCT GGC TCA	288
5067 Thr Cys Val Asn Gly Val Cys Trp Thr Val Tyr His Gly Ala Gly Ser	
5068 85 90 95	

5069

5070 AAG ACC TTA GCC GGC CCA AAG GGG CCA ATC ACC CAG ATG TAC ACT AAT	336
5071 Lys Thr Leu Ala Gly Pro Lys Gly Pro Ile Thr Gln Met Tyr Thr Asn	
5072 100 105 110	

5073

5074 GTG GAC CAG GAC CTC GTC GGC TGG CAG GCG CCC CCC GGG GCG CGT TCC	384
5075 Val Asp Gln Asp Leu Val Gly Trp Gln Ala Pro Pro Gly Ala Arg Ser	

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723

 DATE: 12/09/98
 TIME: 16:06:48
INPUT SET: S30248.raw

5076	115	120	125	
5077				
5078	TTG ACA CCA TGC ACC TGT GGC AGC TCA GAC CTT TAC TTG GTC ACG AGA			432
5079	Leu Thr Pro Cys Thr Cys Gly Ser Ser Asp Leu Tyr Leu Val Thr Arg			
5080	130	135	140	
5081				
5082	CAT GCT GAC GTC ATT CCG GTG CGC CGG CGG GGC GAC AGT AGG GGG AGC			480
5083	His Ala Asp Val Ile Pro Val Arg Arg Arg Gly Asp Ser Arg Gly Ser			
5084	145	150	155	160
5085				
5086	CTG CTC TCC CCC AGG CCT GTC TCC TAC TTG AAG GGC TCT TCG GGT GGT			528
5087	Leu Leu Ser Pro Arg Pro Val Ser Tyr Leu Lys Gly Ser Ser Gly Gly			
5088	165	170	175	
5089				
5090	CCA CTG CTC TGC CCT TCG GGG CAC GCT GTG GGC ATC TTC CGG GCT GCC			576
5091	Pro Leu Leu Cys Pro Ser Gly His Ala Val Gly Ile Phe Arg Ala Ala			
5092	180	185	190	
5093				
5094	GTA TGC ACC CGG GGG GTT GCG AAG GCG GTG GAC TTT GTG CCC GTA GAG			624
5095	Val Cys Thr Arg Gly Val Ala Lys Ala Val Asp Phe Val Pro Val Glu			
5096	195	200	205	
5097				
5098	TCC ATG GAA ACT ACT ATG CGG TCT CCG GTC TTC ACG GAC AAC TCA TCC			672
5099	Ser Met Glu Thr Thr Met Arg Ser Pro Val Phe Thr Asp Asn Ser Ser			
5100	210	215	220	
5101				
5102	CCC CCG GCC GTA CCG CAG TCA TTT CAA GTG GCC CAC CTA CAC GCT CCC			720
5103	Pro Pro Ala Val Pro Gln Ser Phe Gln Val Ala His Leu His Ala Pro			
5104	225	230	235	240
5105				
5106	ACT GGC AGC GGC AAG AGT ACT AAA GTG CCG GCT GCA TAT GCA GCC CAA			768
5107	Thr Gly Ser Gly Lys Ser Thr Lys Val Pro Ala Ala Tyr Ala Ala Gln			
5108	245	250	255	
5109				
5110	GGG TAC AAG GTG CTC GTC CTC AAT CCG TCC GTT GCC GCT ACC TTA GGG			816
5111	Gly Tyr Lys Val Leu Val Leu Asn Pro Ser Val Ala Ala Thr Leu Gly			
5112	260	265	270	
5113				
5114	TTT GGG GCG TAT ATG TCT AAG GCA CAC GGT ATT GAC CCC AAC ATC AGA			864
5115	Phe Gly Ala Tyr Met Ser Lys Ala His Gly Ile Asp Pro Asn Ile Arg			
5116	275	280	285	
5117				
5118	ACT GGG GTA AGG ACC ATT ACC ACA GGC GCC CCC GTC ACA TAC TCT ACC			912
5119	Thr Gly Val Arg Thr Ile Thr Thr Gly Ala Pro Val Thr Tyr Ser Thr			
5120	290	295	300	
5121				
5122	TAT GGC AAG TTT CTT GCC GAT GGT GGT TGC TCT GGG GGC GCT TAT GAC			960
5123	Tyr Gly Lys Phe Leu Ala Asp Gly Gly Cys Ser Gly Gly Ala Tyr Asp			
5124	305	310	315	320
5125				
5126	ATC ATA ATA TGT GAT GAG TGC CAT TCA ACT GAC TCG ACT ACA ATC TTG			1008
5127	Ile Ile Ile Cys Asp Glu Cys His Ser Thr Asp Ser Thr Thr Ile Leu			
5128	325	330	335	

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

 DATE: 12/09/98
 TIME: 16:06:48
INPUT SET: S30248.raw

5129	GGC ATC GGC ACA GTC CTG GAC CAA GCG GAG ACG GCT GGA GCG CGG CTT	1056
5130	Gly Ile Gly Thr Val Leu Asp Gln Ala Glu Thr Ala Gly Ala Arg Leu	
5131	340 345 350	
5133		
5134	GTC GTG CTC GCC ACC GCT ACG CCT CCG GGA TCG GTC ACC GTG CCA CAC	1104
5135	Val Val Leu Ala Thr Ala Thr Pro Pro Gly Ser Val Thr Val Pro His	
5136	355 360 365	
5137		
5138	CCA AAC ATC GAG GAG GTG GCC CTG TCT AAT ACT GGA GAG ATC CCC TTC	1152
5139	Pro Asn Ile Glu Glu Val Ala Leu Ser Asn Thr Gly Glu Ile Pro Phe	
5140	370 375 380	
5141		
5142	TAT GGC AAA GCC ATC CCC ATT GAA GCC ATC AGG GGG GGA AGG CAT CTC	1200
5143	Tyr Gly Lys Ala Ile Pro Ile Glu Ala Ile Arg Gly Arg His Leu	
5144	385 390 395 400	
5145		
5146	ATT TTC TGT CAT TCC AAG AAG AAG TGC GAC GAG CTC GCC GCA AAG CTG	1248
5147	Ile Phe Cys His Ser Lys Lys Cys Asp Glu Leu Ala Ala Lys Leu	
5148	405 410 415	
5149		
5150	TCA GGC CTC GGA ATC AAC GCT GTG GCG TAT TAC CGG GGG CTC GAT GTG	1296
5151	Ser Gly Leu Gly Ile Asn Ala Val Ala Tyr Tyr Arg Gly Leu Asp Val	
5152	420 425 430	
5153		
5154	TCC GTC ATA CCA ACT ATC GGA GAC GTC GTT GTC GTG GCA ACA GAC GCT	1344
5155	Ser Val Ile Pro Thr Ile Gly Asp Val Val Val Val Ala Thr Asp Ala	
5156	435 440 445	
5157		
5158	CTG ATG ACG GGC TAT ACG GGC GAC TTT GAC TCA GTG ATC GAC TGT AAC	1392
5159	Leu Met Thr Gly Tyr Thr Gly Asp Phe Asp Ser Val Ile Asp Cys Asn	
5160	450 455 460	
5161		
5162	ACA TGT GTC ACC CAG ACA GTC GAC TTC AGC TTG GAT CCC ACC TTC ACC	1440
5163	Thr Cys Val Thr Gln Thr Val Asp Phe Ser Leu Asp Pro Thr Phe Thr	
5164	465 470 475 480	
5165		
5166	ATT GAG ACG ACG ACC GTG CCT CAA GAC GCA GTG TCG CGC TCG CAG CGG	1488
5167	Ile Glu Thr Thr Val Pro Gln Asp Ala Val Ser Arg Ser Gln Arg	
5168	485 490 495	
5169		
5170	CGG GGT AGG ACT GGC AGG GGT AGG AGA GGC ATC TAC AGG TTT GTG ACT	1536
5171	Arg Gly Arg Thr Gly Arg Gly Arg Gly Ile Tyr Arg Phe Val Thr	
5172	500 505 510	
5173		
5174	CCG GGA GAA CGG CCC TCG GGC ATG TTC GAT TCC TCG GTC CTG TGT GAG	1584
5175	Pro Gly Glu Arg Pro Ser Gly Met Phe Asp Ser Ser Val Leu Cys Glu	
5176	515 520 525	
5177		
5178	TGC TAT GAC GCG GGC TGT GCT TGG TAC GAG CTC ACC CCC GCC GAG ACC	1632
5179	Cys Tyr Asp Ala Gly Cys Ala Trp Tyr Glu Leu Thr Pro Ala Glu Thr	
5180	530 535 540	
5181		

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:06:49

INPUT SET: S30248.raw

5182	TCG GTT AGG TTG CGG GCC TAC CTG AAC ACA CCA GGG TTG CCC GTT TGC	1680
5183	Ser Val Arg Leu Arg Ala Tyr Leu Asn Thr Pro Gly Leu Pro Val Cys	
5184	545 550 555 560	
5185		
5186	CAG GAC CAC CTG GAG TTC TGG GAG AGT GTC TTC ACA GGC CTC ACC CAT	1728
5187	Gln Asp His Leu Glu Phe Trp Glu Ser Val Phe Thr Gly Leu Thr His	
5188	565 570 575	
5189		
5190	ATA GAT GCA CAC TTC TTG TCC CAG ACC AAG CAG GCA GGA GAC AAC TTC	1776
5191	Ile Asp Ala His Phe Leu Ser Gln Thr Lys Gln Ala Gly Asp Asn Phe	
5192	580 585 590	
5193		
5194	CCC TAC CTG GTA GCA TAC CAA GCC ACG GTG TGC GCC AGG GCT CAG GCC	1824
5195	Pro Tyr Leu Val Ala Tyr Gln Ala Thr Val Cys Ala Arg Ala Gln Ala	
5196	595 600 605	
5197		
5198	CCA CCT CCA TCA TGG GAT CAA ATG TGG AAG TGT CTC ATA CGG CTG AAA	1872
5199	Pro Pro Pro Ser Trp Asp Gln Met Trp Lys Cys Leu Ile Arg Leu Lys	
5200	610 615 620	
5201		
5202	CCT ACG CTG CAC GGG CCA ACA CCC TTG CTG TAC AGG CTG GGA GCC GTC	1920
5203	Pro Thr Leu His Gly Pro Thr Pro Leu Leu Tyr Arg Leu Gly Ala Val	
5204	625 630 635 640	
5205		
5206	CAA AAT GAG GTC ACC CTC ACC CAC CCC ATA ACC AAA TAC ATC ATG GCA	1968
5207	Gln Asn Glu Val Thr Leu Thr His Pro Ile Thr Lys Tyr Ile Met Ala	
5208	645 650 655	
5209		
5210	TGC ATG TCG GCT GAC CTG GAG GTC GTC ACT	1998
5211	Cys Met Ser Ala Asp Leu Glu Val Val	
5212	660 665	
5213	(2) INFORMATION FOR SEQ ID NO:104:	
5214	(i) SEQUENCE CHARACTERISTICS:	
5215	(A) LENGTH: 1998 base pairs	
5216	(B) TYPE: nucleic acid	
5217	(C) STRANDEDNESS: single	
5218	(D) TOPOLOGY: linear	
5219		
5220	(ii) MOLECULE TYPE: cDNA	
5221		
5222		
5223		
5224		
5225	(ix) FEATURE:	
5226	(A) NAME/KEY: CDS	
5227	(B) LOCATION: 1..1995	
5228		
5229		
--> 5230	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:104:	
5231		
5232	ATG GGC AGC AGC CAT CAT CAT CAT CAC AGC AGC GGC CTG GTG CCG	48
5233	Met Gly Ser Ser His His His His His Ser Ser Gly Leu Val Pro	
5234	1 5 10 15	

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:06:50

INPUT SET: S30248.raw

5235	CGC GGC AGC CAT ATG GGT TCT GTT ATT GTT GGT AGA ATT ATT TTA		96	
5236	Arg Gly Ser His Met Gly Ser Val Val Ile Val Gly Arg Ile Ile Leu			
5237	20	25	30	
5238				
5239				
5240	TCT GGT AGT GGT AGT ATC ACG GCC TAC TCC CAA CAG ACG CGG GGC CTA		144	
5241	Ser Gly Ser Gly Ser Ile Thr Ala Tyr Ser Gln Gln Thr Arg Gly Leu			
5242	35	40	45	
5243				
5244	CTT GGT TGC ATC AAG ACT AGC CTT ACA GGC CGG GAC AAG AAC CAG GTC		192	
5245	Leu Gly Cys Ile Lys Thr Ser Leu Thr Gly Arg Asp Lys Asn Gln Val			
5246	50	55	60	
5247				
5248	GAG GGA GAG GTT CAG GTG GTT TCC ACC GCA ACA CAA TCC TTC CTG GCG		240	
5249	Glu Gly Glu Val Gln Val Val Ser Thr Ala Thr Gln Ser Phe Leu Ala			
5250	65	70	75	80
5251				
5252	ACC TGC GTC AAC GGC GTG TGT TGG ACC GTT TAC CAT GGT GCT GGC TCA		288	
5253	Thr Cys Val Asn Gly Val Cys Trp Thr Val Tyr His Gly Ala Gly Ser			
5254	85	90	95	
5255				
5256	AAG ACC TTA GCC GGC CCA AAG GGG CCA ATC ACC CAG ATG TAC ACT AAT		336	
5257	Lys Thr Leu Ala Gly Pro Lys Gly Pro Ile Thr Gln Met Tyr Thr Asn			
5258	100	105	110	
5259				
5260	GTG GAC CAG GAC CTC GTC GGC TGG CAG GCG CCC CCC GGG GCG CGT TCC		384	
5261	Val Asp Gln Asp Leu Val Gly Trp Gln Ala Pro Pro Gly Ala Arg Ser			
5262	115	120	125	
5263				
5264	TTG ACA CCA TGC ACC TGT GGC AGC TCA GAC CTT TAC TTG GTC ACG AGA		432	
5265	Leu Thr Pro Cys Thr Cys Gly Ser Ser Asp Leu Tyr Leu Val Thr Arg			
5266	130	135	140	
5267				
5268	CAT GCT GAC GTC ATT CCG GTG CGC CGG CGG GGC GAC AGT AGG GGG AGC		480	
5269	His Ala Asp Val Ile Pro Val Arg Arg Arg Gly Asp Ser Arg Gly Ser			
5270	145	150	155	160
5271				
5272	CTG CTC TCC CCC AGG CCT GTC TCC TAC TTG AAG GGC TCT TCG GGT GGT		528	
5273	Leu Leu Ser Pro Arg Pro Val Ser Tyr Leu Lys Gly Ser Ser Gly Gly			
5274	165	170	175	
5275				
5276	CCA CTG CTC TGC CCT TCG GGG CAC GCT GTG GGC ATC TTC CGG GCT GCC		576	
5277	Pro Leu Leu Cys Pro Ser Gly His Ala Val Gly Ile Phe Arg Ala Ala			
5278	180	185	190	
5279				
5280	GTA TGC ACC CGG GGG GTT GCG AAG GCG GTG GAC TTT GTG CCC GTA GAG		624	
5281	Val Cys Thr Arg Gly Val Ala Lys Ala Val Asp Phe Val Pro Val Glu			
5282	195	200	205	
5283				
5284	TCC ATG GAA ACT ACT ATG CGG TCT CCG GTC TTC ACG GAC AAC TCA TCC		672	
5285	Ser Met Glu Thr Thr Met Arg Ser Pro Val Phe Thr Asp Asn Ser Ser			
5286	210	215	220	
5287				

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

 DATE: 12/09/98
 TIME: 16:06:50
INPUT SET: S30248.raw

5288	CCC CCG GCC GTA CCG CAG TCA TTT CAA GTG GCC CAC CTA CAC GCT CCC	720
5289	Pro Pro Ala Val Pro Gln Ser Phe Gln Val Ala His Leu His Ala Pro	
5290	225 230 235 240	
5291		
5292	ACT GGC AGC GGC AAG AGT ACT AAA GTG CCG GCT GCA TAT GCA GCC CAA	768
5293	Thr Gly Ser Gly Lys Ser Thr Lys Val Pro Ala Ala Tyr Ala Ala Gln	
5294	245 250 255	
5295		
5296	GGG TAC AAG GTG CTC GTC CTC AAT CCG TCC GTT GCC GCT ACC TTA GGG	816
5297	Gly Tyr Lys Val Leu Val Leu Asn Pro Ser Val Ala Ala Thr Leu Gly	
5298	260 265 270	
5299		
5300	TTT GGG GCG TAT ATG TCT AAG GCA CAC GGT ATT GAC CCC AAC ATC AGA	864
5301	Phe Gly Ala Tyr Met Ser Lys Ala His Gly Ile Asp Pro Asn Ile Arg	
5302	275 280 285	
5303		
5304	ACT GGG GTA AGG ACC ATT ACC ACA GGC GCC CCC GTC ACA TAC TCT ACC	912
5305	Thr Gly Val Arg Thr Ile Thr Thr Gly Ala Pro Val Thr Tyr Ser Thr	
5306	290 295 300	
5307		
5308	TAT GGC AAG TTT CTT GCC GAT GGT GGT TGC TCT GGG GGC GCT TAT GAC	960
5309	Tyr Gly Lys Phe Leu Ala Asp Gly Gly Cys Ser Gly Gly Ala Tyr Asp	
5310	305 310 315 320	
5311		
5312	ATC ATA ATA TGT GAT GAG TGC CAT TCA ACT GAC TCG ACT ACA ATC TTG	1008
5313	Ile Ile Ile Cys Asp Glu Cys His Ser Thr Asp Ser Thr Thr Ile Leu	
5314	325 330 335	
5315		
5316	GGC ATC GGC ACA GTC CTG GAC CAA GCG GAG ACG GCT GGA GCG CGG CTT	1056
5317	Gly Ile Gly Thr Val Leu Asp Gln Ala Glu Thr Ala Gly Ala Arg Leu	
5318	340 345 350	
5319		
5320	GTC GTG CTC GCC ACC GCT ACG CCT CCG GGA TCG GTC ACC GTG CCA CAC	1104
5321	Val Val Leu Ala Thr Ala Thr Pro Pro Gly Ser Val Thr Val Pro His	
5322	355 360 365	
5323		
5324	CCA AAC ATC GAG GAG GTG GCC CTG TCT AAT ACT GGA GAG ATC CCC TTC	1152
5325	Pro Asn Ile Glu Glu Val Ala Leu Ser Asn Thr Gly Glu Ile Pro Phe	
5326	370 375 380	
5327		
5328	TAT GGC AAA GCC ATC CCC ATT GAA GCC ATC AGG GGG GGA AGG CAT CTC	1200
5329	Tyr Gly Lys Ala Ile Pro Ile Glu Ala Ile Arg Gly Gly Arg His Leu	
5330	385 390 395 400	
5331		
5332	ATT TTC TGT CAT TCC AAG AAG TGC GAC GAG CTC GCC GCA AAG CTG	1248
5333	Ile Phe Cys His Ser Lys Lys Cys Asp Glu Leu Ala Ala Lys Leu	
5334	405 410 415	
5335		
5336	TCA GGC CTC GGA ATC AAC GCT GTG GCG TAT TAC CGG GGG CTC GAT GTG	1296
5337	Ser Gly Leu Gly Ile Asn Ala Val Ala Tyr Tyr Arg Gly Leu Asp Val	
5338	420 425 430	
5339		
5340	TCC GTC ATA CCA ACT ATC GGA GAC GTC GTT GTC GTG GCA ACA GAC GCT	1344

**RAW SEQUENCE LISTING
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TIME: 16:06:51

INPUT SET: S30248.raw

5341	Ser Val Ile Pro Thr Ile Gly Asp Val Val Val Val Ala Thr Asp Ala			
5342	435	440	445	
5343				
5344	CTG ATG ACG GGC TAT ACG GGC GAC TTT GAC TCA GTG ATC GAC TGT AAC		1392	
5345	Leu Met Thr Gly Tyr Thr Gly Asp Phe Asp Ser Val Ile Asp Cys Asn			
5346	450	455	460	
5347				
5348	ACA TGT GTC ACC CAG ACA GTC GAC TTC AGC TTG GAT CCC ACC TTC ACC		1440	
5349	Thr Cys Val Thr Gln Thr Val Asp Phe Ser Leu Asp Pro Thr Phe Thr			
5350	465	470	475	480
5351				
5352	ATT GAG ACG ACG ACC GTG CCT CAA GAC GCA GTG TCG CGC TCG CAG CGG		1488	
5353	Ile Glu Thr Thr Val Pro Gln Asp Ala Val Ser Arg Ser Gln Arg			
5354	485	490	495	
5355				
5356	CGG GGT AGG ACT GGC AGG GGT AGG AGA GGC ATC TAC AGG TTT GTG ACT		1536	
5357	Arg Gly Arg Thr Gly Arg Gly Arg Gly Ile Tyr Arg Phe Val Thr			
5358	500	505	510	
5359				
5360	CCG GGA GAA CGG CCC TCG GGC ATG TTC GAT TCC TCG GTC CTG TGT GAG		1584	
5361	Pro Gly Glu Arg Pro Ser Gly Met Phe Asp Ser Ser Val Leu Cys Glu			
5362	515	520	525	
5363				
5364	TGC TAT GAC GCG GGC TGT GCT TGG TAC GAG CTC ACC CCC GCC GAG ACC		1632	
5365	Cys Tyr Asp Ala Gly Cys Ala Trp Tyr Glu Leu Thr Pro Ala Glu Thr			
5366	530	535	540	
5367				
5368	TCG GTT AGG TTG CGG GCC TAC CTG AAC ACA CCA GGG TTG CCC GTT TGC		1680	
5369	Ser Val Arg Leu Arg Ala Tyr Leu Asn Thr Pro Gly Leu Pro Val Cys			
5370	545	550	555	560
5371				
5372	CAG GAC CAC CTG GAG TTC TGG GAG AGT GTC TTC ACA GGC CTC ACC CAT		1728	
5373	Gln Asp His Leu Glu Phe Trp Glu Ser Val Phe Thr Gly Leu Thr His			
5374	565	570	575	
5375				
5376	ATA GAT GCA CAC TTC TTG TCC CAG ACC AAG CAG GCA GGA GAC AAC TTC		1776	
5377	Ile Asp Ala His Phe Leu Ser Gln Thr Lys Gln Ala Gly Asp Asn Phe			
5378	580	585	590	
5379				
5380	CCC TAC CTG GTA GCA TAC CAA GCC ACG GTG TGC GCC AGG GCT CAG GCC		1824	
5381	Pro Tyr Leu Val Ala Tyr Gln Ala Thr Val Cys Ala Arg Ala Gln Ala			
5382	595	600	605	
5383				
5384	CCA CCT CCA TCA TGG GAT CAA ATG TGG AAG TGT CTC ATA CGG CTG AAA		1872	
5385	Pro Pro Pro Ser Trp Asp Gln Met Trp Lys Cys Leu Ile Arg Leu Lys			
5386	610	615	620	
5387				
5388	CCT ACG CTG CAC GGG CCA ACA CCC TTG CTG TAC AGG CTG GGA GCC GTC		1920	
5389	Pro Thr Leu His Gly Pro Thr Pro Leu Leu Tyr Arg Leu Gly Ala Val			
5390	625	630	635	640
5391				
5392	CAA AAT GAG GTC ACC CTC ACC CAC CCC ATA ACC AAA TAC ATC ATG GCA		1968	
5393	Gln Asn Glu Val Thr His Pro Ile Thr Lys Tyr Ile Met Ala			

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

 DATE: 12/09/98
 TIME: 16:06:52
INPUT SET: S30248.raw

5394 645 650 655
 5395
 5396 TGC ATG TCG GCT GAC CTG GAG GTC GTC ACT 1998
 5397 Cys Met Ser Ala Asp Leu Glu Val Val
 5398 660 665 (2) INFORMATION FOR SEQ ID NO:105:
 5399
 5400 (i) SEQUENCE CHARACTERISTICS:
 5401 (A) LENGTH: 1998 base pairs
 5402 (B) TYPE: nucleic acid
 5403 (C) STRANDEDNESS: single
 5404 (D) TOPOLOGY: linear
 5405
 5406 (ii) MOLECULE TYPE: cDNA
 5407
 5408
 5409
 5410 (ix) FEATURE:
 5411 (A) NAME/KEY: CDS
 5412 (B) LOCATION: 1..1995
 5413
 5414
 --> 5415 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:105:
 5416
 5417 ATG GGC AGC AGC CAT CAT CAT CAT CAC AGC AGC GGC CTG GTG CCG 48
 5418 Met Gly Ser Ser His His His His His Ser Ser Gly Leu Val Pro
 5419 1 5 10 15
 5420
 5421 CGC GGC AGC CAT ATG GGT TCT GTT ATT GTT GGT AGA ATT ATT ATT TTA 96
 5422 Arg Gly Ser His Met Gly Ser Val Val Ile Val Gly Arg Ile Ile Leu
 5423 20 25 30
 5424
 5425 TCT GGT AGT GGT AGT ATC ACG GCC TAC TCC CAA CAG ACG CGG GGC CTA 144
 5426 Ser Gly Ser Gly Ser Ile Thr Ala Tyr Ser Gln Gln Thr Arg Gly Leu
 5427 35 40 45
 5428
 5429 CTT GGT TGC AAG AAG ACT AGC CTT ACA GGC CGG GAC AAG AAC CAG GTC 192
 5430 Leu Gly Cys Lys Lys Thr Ser Leu Thr Gly Arg Asp Lys Asn Gln Val
 5431 50 55 60
 5432
 5433 GAG GGA GAG GTT CAG GTG GTT TCC ACC GCA ACA CAA TCC TTC CTG GCG 240
 5434 Glu Gly Val Gln Val Val Ser Thr Ala Thr Gln Ser Phe Leu Ala
 5435 65 70 75 80
 5436
 5437 ACC TGC GTC AAC GGC GTG TGT TGG ACC GTT TAC CAT GGT GCT GGC TCA 288
 5438 Thr Cys Val Asn Gly Val Cys Trp Thr Val Tyr His Gly Ala Gly Ser
 5439 85 90 95
 5440
 5441 AAG ACC TTA GCC GGC CCA AAG GGG CCA ATC ACC CAG ATG TAC ACT AAT 336
 5442 Lys Thr Leu Ala Gly Pro Lys Gly Pro Ile Thr Gln Met Tyr Thr Asn
 5443 100 105 110
 5444
 5445 GTG GAC CAG GAC CTC GTC GGC TGG CAG GCG CCC CCC GGG GCG CGT TCC 384
 5446 Val Asp Gln Asp Leu Val Gly Trp Gln Ala Pro Pro Gly Ala Arg Ser

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723

 DATE: 12/09/98
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INPUT SET: S30248.raw

5447	115	120	125	
5448				
5449	TTG ACA CCA TGC ACC TGT GGC AGC TCA GAC CTT TAC TTG GTC ACG AGA			432
5450	Leu Thr Pro Cys Thr Cys Gly Ser Ser Asp Leu Tyr Leu Val Thr Arg			
5451	130	135	140	
5452				
5453	CAT GCT GAC GTC ATT CCG GTG CGC CGG CGG GGC GAC AGT AGG GGG AGC			480
5454	His Ala Asp Val Ile Pro Val Arg Arg Arg Gly Asp Ser Arg Gly Ser			
5455	145	150	155	160
5456				
5457	CTG CTC TCC CCC AGG CCT GTC TCC TAC TTG AAG GGC TCT TCG GGT GGT			528
5458	Leu Leu Ser Pro Arg Pro Val Ser Tyr Leu Lys Gly Ser Ser Gly Gly			
5459	165	170	175	
5460				
5461	CCA CTG CTC TGC CCT TCG GGG CAC GCT GTG GGC ATC TTC CGG GCT GCC			576
5462	Pro Leu Leu Cys Pro Ser Gly His Ala Val Gly Ile Phe Arg Ala Ala			
5463	180	185	190	
5464				
5465	GTA TGC ACC CGG GGG GTT GCG AAG GCG GTG GAC TTT GTG CCC GTA GAG			624
5466	Val Cys Thr Arg Gly Val Ala Lys Ala Val Asp Phe Val Pro Val Glu			
5467	195	200	205	
5468				
5469	TCC ATG GAA ACT ACT ATG CGG TCT CCG GTC TTC ACG GAC AAC TCA TCC			672
5470	Ser Met Glu Thr Thr Met Arg Ser Pro Val Phe Thr Asp Asn Ser Ser			
5471	210	215	220	
5472				
5473	CCC CCG GCC GTA CCG CAG TCA TTT CAA GTG GCC CAC CTA CAC GCT CCC			720
5474	Pro Pro Ala Val Pro Gln Ser Phe Gln Val Ala His Leu His Ala Pro			
5475	225	230	235	240
5476				
5477	ACT GGC AGC GGC AAG AGT ACT AAA GTG CCG GCT GCA TAT GCA GCC CAA			768
5478	Thr Gly Ser Gly Lys Ser Thr Lys Val Pro Ala Ala Tyr Ala Ala Gln			
5479	245	250	255	
5480				
5481	GGG TAC AAG GTG CTC GTC CTC AAT CCG TCC GTT GCC GCT ACC TTA GGG			816
5482	Gly Tyr Lys Val Leu Val Leu Asn Pro Ser Val Ala Ala Thr Leu Gly			
5483	260	265	270	
5484				
5485	TTT GGG GCG TAT ATG TCT AAG GCA CAC GGT ATT GAC CCC AAC ATC AGA			864
5486	Phe Gly Ala Tyr Met Ser Lys Ala His Gly Ile Asp Pro Asn Ile Arg			
5487	275	280	285	
5488				
5489	ACT GGG GTA AGG ACC ATT ACC ACA GGC GCC CCC GTC ACA TAC TCT ACC			912
5490	Thr Gly Val Arg Thr Ile Thr Thr Gly Ala Pro Val Thr Tyr Ser Thr			
5491	290	295	300	
5492				
5493	TAT GGC AAG TTT CTT GCC GAT GGT GGT TGC TCT GGG GGC GCT TAT GAC			960
5494	Tyr Gly Lys Phe Leu Ala Asp Gly Gly Cys Ser Gly Gly Ala Tyr Asp			
5495	305	310	315	320
5496				
5497	ATC ATA ATA TGT GAT GAG TGC CAT TCA ACT GAC TCG ACT ACA ATC TTG			1008
5498	Ile Ile Ile Cys Asp Glu Cys His Ser Thr Asp Ser Thr Thr Ile Leu			
5499	325	330	335	

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:06:53

INPUT SET: S30248.raw

5500	GGC ATC GGC ACA GTC CTG GAC CAA GCG GAG ACG GCT GGA GCG CGG CTT	1056
5501	Gly Ile Gly Thr Val Leu Asp Gln Ala Glu Thr Ala Gly Ala Arg Leu	
5502	340	345
5503	350	
5504		
5505	GTC GTG CTC GCC ACC GCT ACG CCT CCG GGA TCG GTC ACC GTG CCA CAC	1104
5506	Val Val Leu Ala Thr Ala Thr Pro Pro Gly Ser Val Thr Val Pro His	
5507	355	360
5508	365	
5509		
5510	CCA AAC ATC GAG GAG GTG GCC CTG TCT AAT ACT GGA GAG ATC CCC TTC	1152
5511	Pro Asn Ile Glu Glu Val Ala Leu Ser Asn Thr Gly Glu Ile Pro Phe	
5512	370	375
5513	380	380
5514	TAT GGC AAA GCC ATC CCC ATT GAA GCC ATC AGG GGG GGA AGG CAT CTC	1200
5515	Tyr Gly Lys Ala Ile Pro Ile Glu Ala Ile Arg Gly Gly Arg His Leu	
5516	385	390
5517	395	400
5518		
5519	ATT TTC TGT CAT TCC AAG AAG AAG TGC GAC GAG CTC GCC GCA AAG CTG	1248
5520	Ile Phe Cys His Ser Lys Lys Cys Asp Glu Leu Ala Ala Lys Leu	
5521	405	410
5522	415	
5523		
5524	TCA GGC CTC GGA ATC AAC GCT GTG GCG TAT TAC CGG GGG CTC GAT GTG	1296
5525	Ser Gly Leu Gly Ile Asn Ala Val Ala Tyr Tyr Arg Gly Leu Asp Val	
5526	420	425
5527	430	
5528		
5529	TCC GTC ATA CCA ACT ATC GGA GAC GTC GTT GTC GTG GCA ACA GAC GCT	1344
5530	Ser Val Ile Pro Thr Ile Gly Asp Val Val Val Ala Thr Asp Ala	
5531	435	440
5532	445	
5533		
5534	CTG ATG ACG GGC TAT ACG GGC GAC TTT GAC TCA GTG ATC GAC TGT AAC	1392
5535	Leu Met Thr Gly Tyr Thr Gly Asp Phe Asp Ser Val Ile Asp Cys Asn	
5536	450	455
5537	460	
5538		
5539	ACA TGT GTC ACC CAG ACA GTC GAC TTC AGC TTG GAT CCC ACC TTC ACC	1440
5540	Thr Cys Val Thr Gln Thr Val Asp Phe Ser Leu Asp Pro Thr Phe Thr	
5541	465	470
5542	475	480
5543		
5544		
5545	ATT GAG ACG ACG ACC GTG CCT CAA GAC GCA GTG TCG CGC TCG CAG CGG	1488
5546	Ile Glu Thr Thr Val Pro Gln Asp Ala Val Ser Arg Ser Gln Arg	
5547	485	490
5548	495	
5549		
5550	CGG GGT AGG ACT GGC AGG GGT AGG AGA GGC ATC TAC AGG TTT GTG ACT	1536
5551	Arg Gly Arg Thr Gly Arg Gly Arg Gly Ile Tyr Arg Phe Val Thr	
5552	500	505
5553	510	
5554		
5555	CCG GGA GAA CGG CCC TCG GGC ATG TTC GAT TCC TCG GTC CTG TGT GAG	1584
5556	Pro Gly Glu Arg Pro Ser Gly Met Phe Asp Ser Ser Val Leu Cys Glu	
5557	515	520
5558	525	
5559		
5560	TGC TAT GAC GCG GGC TGT GCT TGG TAC GAG CTC ACC CCC GCC GAG ACC	1632
5561	Cys Tyr Asp Ala Gly Cys Ala Trp Tyr Glu Leu Thr Pro Ala Glu Thr	
5562	530	535
5563	540	

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:06:54

INPUT SET: S30248.raw

5553	TCG GTT AGG TTG CGG GCC TAC CTG AAC ACA CCA GGG TTG CCC GTT TGC	1680
5554	Ser Val Arg Leu Arg Ala Tyr Leu Asn Thr Pro Gly Leu Pro Val Cys	
5555	545 550 555 560	
5556		
5557	CAG GAC CAC CTG GAG TTC TGG GAG AGT GTC TTC ACA GGC CTC ACC CAT	1728
5558	Gln Asp His Leu Glu Phe Trp Glu Ser Val Phe Thr Gly Leu Thr His	
5559	565 570 575	
5560		
5561	ATA GAT GCA CAC TTC TTG TCC CAG ACC AAG CAG GCA GGA GAC AAC TTC	1776
5562	Ile Asp Ala His Phe Leu Ser Gln Thr Lys Gln Ala Gly Asp Asn Phe	
5563	580 585 590	
5564		
5565	CCC TAC CTG GTA GCA TAC CAA GCC ACG GTG TGC GCC AGG GCT CAG GCC	1824
5566	Pro Tyr Leu Val Ala Tyr Gln Ala Thr Val Cys Ala Arg Ala Gln Ala	
5567	595 600 605	
5568		
5569	CCA CCT CCA TCA TGG GAT CAA ATG TGG AAG TGT CTC ATA CGG CTG AAA	1872
5570	Pro Pro Pro Ser Trp Asp Gln Met Trp Lys Cys Leu Ile Arg Leu Lys	
5571	610 615 620	
5572		
5573	CCT ACG CTG CAC GGG CCA ACA CCC TTG CTG TAC AGG CTG GGA GCC GTC	1920
5574	Pro Thr Leu His Gly Pro Thr Pro Leu Leu Tyr Arg Leu Gly Ala Val	
5575	625 630 635 640	
5576		
5577	CAA AAT GAG GTC ACC CTC ACC CAC CCC ATA ACC AAA TAC ATC ATG GCA	1968
5578	Gln Asn Glu Val Thr Leu Thr His Pro Ile Thr Lys Tyr Ile Met Ala	
5579	645 650 655	
5580		
5581	TGC ATG TCG GCT GAC CTG GAG GTC GTC ACT	1998
5582	Cys Met Ser Ala Asp Leu Glu Val Val	<i>hard return</i>
5583	660 665	(2) INFORMATION FOR SEQ ID NO:106:
5584		
5585	(i) SEQUENCE CHARACTERISTICS:	
5586	(A) LENGTH: 1998 base pairs	
5587	(B) TYPE: nucleic acid	
5588	(C) STRANDEDNESS: single	
5589	(D) TOPOLOGY: linear	
5590		
5591	(ii) MOLECULE TYPE: cDNA	
5592		
5593		
5594		
5595	(ix) FEATURE:	
5596	(A) NAME/KEY: CDS	
5597	(B) LOCATION: 1..1995	
5598		
5599		
--> 5600	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:106:	
5601		
5602	ATG GGC AGC AGC CAT CAT CAT CAT CAC AGC AGC GGC CTG GTG CCG	48
5603	Met Gly Ser Ser His His His His His Ser Ser Gly Leu Val Pro	
5604	1 5 10 15	
5605		

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723

DATE: 12/09/98
 TIME: 16:06:54

INPUT SET: S30248.raw

5606	CGC GGC AGC CAT ATG GGT TCT GTT ATT GTT GGT AGA ATT ATT TTA	96
5607	Arg Gly Ser His Met Gly Ser Val Val Ile Val Gly Arg Ile Ile Leu	
5608	20 25 30	
5609		
5610	TCT GGT AGT GGT AGT ATC ACG GCC TAC TCC CAA CAG ACG CGG GGC CTA	144
5611	Ser Gly Ser Gly Ser Ile Thr Ala Tyr Ser Gln Gln Thr Arg Gly Leu	
5612	35 40 45	
5613		
5614	CTT GGT TGC ATC ATC ACT AGC CTT ACA GGC CGG GAC AAG AAC CAG GTC	192
5615	Leu Gly Cys Ile Ile Thr Ser Leu Thr Gly Arg Asp Lys Asn Gln Val	
5616	50 55 60	
5617		
5618	GAG GGA GAG GTT CAG GTG GTT TCC ACC GCA ACA CAA TCC TTC CTG GCG	240
5619	Glu Gly Glu Val Gln Val Val Ser Thr Ala Thr Gln Ser Phe Leu Ala	
5620	65 70 75 80	
5621		
5622	ACC TGC GTC AAC GGC GTG TGT TGG ACC GTT TAC CAT GGT GCT GGC TCA	288
5623	Thr Cys Val Asn Gly Val Cys Trp Thr Val Tyr His Gly Ala Gly Ser	
5624	85 90 95	
5625		
5626	AAG ACC TTA GCC GGC CCA AAG GGG CCA ATC ACC CAG ATG TAC ACT AAT	336
5627	Lys Thr Leu Ala Gly Pro Lys Gly Pro Ile Thr Gln Met Tyr Thr Asn	
5628	100 105 110	
5629		
5630	GTG GAC CAG GAC CTC GTC GGC TGG CAG GCG CCC CCC GGG GCG CGT TCC	384
5631	Val Asp Gln Asp Leu Val Gly Trp Gln Ala Pro Pro Gly Ala Arg Ser	
5632	115 120 125	
5633		
5634	TTG ACA CCA TGC ACC TGT GGC AGC TCA GAC CTT TAC TTG GTC ACG AGA	432
5635	Leu Thr Pro Cys Thr Cys Gly Ser Ser Asp Leu Tyr Leu Val Thr Arg	
5636	130 135 140	
5637		
5638	CAT GCT GAC GTC ATT CCG GTG CGC CGG CGG GGC GAC AGT AGG GGG AGC	480
5639	His Ala Asp Val Ile Pro Val Arg Arg Gly Asp Ser Arg Gly Ser	
5640	145 150 155 160	
5641		
5642	CTG CTC TCC CCC AGG CCT GTC TCC TAC TTG AAG GGC TCT GCT GGT GGT	528
5643	Leu Leu Ser Pro Arg Pro Val Ser Tyr Leu Lys Gly Ser Ala Gly Gly	
5644	165 170 175	
5645		
5646	CCA CTG CTC TGC CCT TCG GGG CAC GCT GTG GGC ATC TTC CGG GCT GCC	576
5647	Pro Leu Leu Cys Pro Ser Gly His Ala Val Gly Ile Phe Arg Ala Ala	
5648	180 185 190	
5649		
5650	GTA TGC ACC CGG GGG GTT GCG AAG GCG GTG GAC TTT GTG CCC GTA GAG	624
5651	Val Cys Thr Arg Gly Val Ala Lys Ala Val Asp Phe Val Pro Val Glu	
5652	195 200 205	
5653		
5654	TCC ATG GAA ACT ACT ATG CGG TCT CCG GTC TTC ACG GAC AAC TCA TCC	672
5655	Ser Met Glu Thr Thr Met Arg Ser Pro Val Phe Thr Asp Asn Ser Ser	
5656	210 215 220	
5657		
5658	CCC CCG GCC GTA CCG CAG TCA TTT CAA GTG GCC CAC CTA CAC GCT CCC	720

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723

DATE: 12/09/98
 TIME: 16:06:55

INPUT SET: S30248.raw

5659	Pro Pro Ala Val Pro Gln Ser Phe Gln Val Ala His Leu His Ala Pro		
5660	225	230	235
5661			240
5662	ACT GGC AGC GGC AAG AGT ACT AAA GTG CCG GCT GCA TAT GCA GCC CAA		768
5663	Thr Gly Ser Gly Lys Ser Thr Lys Val Pro Ala Ala Tyr Ala Ala Gln		
5664	245	250	255
5665			
5666	GGG TAC AAG GTG CTC GTC CTC AAT CCG TCC GTT GCC GCT ACC TTA GGG		816
5667	Gly Tyr Lys Val Leu Val Leu Asn Pro Ser Val Ala Ala Thr Leu Gly		
5668	260	265	270
5669			
5670	TTT GGG GCG TAT ATG TCT AAG GCA CAC GGT ATT GAC CCC AAC ATC AGA		864
5671	Phe Gly Ala Tyr Met Ser Lys Ala His Gly Ile Asp Pro Asn Ile Arg		
5672	275	280	285
5673			
5674	ACT GGG GTA AGG ACC ATT ACC ACA GGC GCC CCC GTC ACA TAC TCT ACC		912
5675	Thr Gly Val Arg Thr Ile Thr Thr Gly Ala Pro Val Thr Tyr Ser Thr		
5676	290	295	300
5677			
5678	TAT GGC AAG TTT CTT GCC GAT GGT GGT TGC TCT GGG GGC GCT TAT GAC		960
5679	Tyr Gly Lys Phe Leu Ala Asp Gly Gly Cys Ser Gly Gly Ala Tyr Asp		
5680	305	310	315
			320
5681			
5682	ATC ATA ATA TGT GAT GAG TGC CAT TCA ACT GAC TCG ACT ACA ATC TTG		1008
5683	Ile Ile Ile Cys Asp Glu Cys His Ser Thr Asp Ser Thr Thr Ile Leu		
5684	325	330	335
5685			
5686	GGC ATC GGC ACA GTC CTG GAC CAA GCG GAG ACG GCT GGA GCG CGG CTT		1056
5687	Gly Ile Gly Thr Val Leu Asp Gln Ala Glu Thr Ala Gly Ala Arg Leu		
5688	340	345	350
5689			
5690	GTC GTG CTC GCC ACC GCT ACG CCT CCG GGA TCG GTC ACC GTG CCA CAC		1104
5691	Val Val Leu Ala Thr Ala Thr Pro Pro Gly Ser Val Thr Val Pro His		
5692	355	360	365
5693			
5694	CCA AAC ATC GAG GAG GTG GCC CTG TCT AAT ACT GGA GAG ATC CCC TTC		1152
5695	Pro Asn Ile Glu Glu Val Ala Leu Ser Asn Thr Gly Glu Ile Pro Phe		
5696	370	375	380
5697			
5698	TAT GGC AAA GCC ATC CCC ATT GAA GCC ATC AGG GGG GGA AGG CAT CTC		1200
5699	Tyr Gly Lys Ala Ile Pro Ile Glu Ala Ile Arg Gly Gly Arg His Leu		
5700	385	390	395
			400
5701			
5702	ATT TTC TGT CAT TCC AAG AAG AAG TGC GAC GAG CTC GCC GCA AAG CTG		1248
5703	Ile Phe Cys His Ser Lys Lys Cys Asp Glu Leu Ala Ala Lys Leu		
5704	405	410	415
5705			
5706	TCA GGC CTC GGA ATC AAC GCT GTG GCG TAT TAC CGG GGG CTC GAT GTG		1296
5707	Ser Gly Leu Gly Ile Asn Ala Val Ala Tyr Tyr Arg Gly Leu Asp Val		
5708	420	425	430
5709			
5710	TCC GTC ATA CCA ACT ATC GGA GAC GTC GTT GTC GTG GCA ACA GAC GCT		1344
5711	Ser Val Ile Pro Thr Ile Gly Asp Val Val Val Ala Thr Asp Ala		

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

 DATE: 12/09/98
 TIME: 16:06:56
INPUT SET: S30248.raw

5712	435	440	445	
5713				
5714	CTG ATG ACG GGC TAT ACG GGC GAC TTT GAC TCA GTG ATC GAC TGT AAC			1392
5715	Leu Met Thr Gly Tyr Thr Gly Asp Phe Asp Ser Val Ile Asp Cys Asn			
5716	450	455	460	
5717				
5718	ACA TGT GTC ACC CAG ACA GTC GAC TTC AGC TTG GAT CCC ACC TTC ACC			1440
5719	Thr Cys Val Thr Gln Thr Val Asp Phe Ser Leu Asp Pro Thr Phe Thr			
5720	465	470	475	480
5721				
5722	ATT GAG ACG ACG ACC GTG CCT CAA GAC GCA GTG TCG CGC TCG CAG CGG			1488
5723	Ile Glu Thr Thr Val Pro Gln Asp Ala Val Ser Arg Ser Gln Arg			
5724	485	490	495	
5725				
5726	CGG GGT AGG ACT GGC AGG GGT AGG AGA GGC ATC TAC AGG TTT GTG ACT			1536
5727	Arg Gly Arg Thr Gly Arg Gly Arg Gly Ile Tyr Arg Phe Val Thr			
5728	500	505	510	
5729				
5730	CCG GGA GAA CGG CCC TCG GGC ATG TTC GAT TCC TCG GTC CTG TGT GAG			1584
5731	Pro Gly Glu Arg Pro Ser Gly Met Phe Asp Ser Ser Val Leu Cys Glu			
5732	515	520	525	
5733				
5734	TGC TAT GAC GCG GGC TGT GCT TGG TAC GAG CTC ACC CCC GCC GAG ACC			1632
5735	Cys Tyr Asp Ala Gly Cys Ala Trp Tyr Glu Leu Thr Pro Ala Glu Thr			
5736	530	535	540	
5737				
5738	TCG GTT AGG TTG CGG GCC TAC CTG AAC ACA CCA GGG TTG CCC GTT TGC			1680
5739	Ser Val Arg Leu Arg Ala Tyr Leu Asn Thr Pro Gly Leu Pro Val Cys			
5740	545	550	555	560
5741				
5742	CAG GAC CAC CTG GAG TTC TGG GAG AGT GTC TTC ACA GGC CTC ACC CAT			1728
5743	Gln Asp His Leu Glu Phe Trp Glu Ser Val Phe Thr Gly Leu Thr His			
5744	565	570	575	
5745				
5746	ATA GAT GCA CAC TTC TTG TCC CAG ACC AAG CAG GCA GGA GAC AAC TTC			1776
5747	Ile Asp Ala His Phe Leu Ser Gln Thr Lys Gln Ala Gly Asp Asn Phe			
5748	580	585	590	
5749				
5750	CCC TAC CTG GTA GCA TAC CAA GCC ACG GTG TGC GCC AGG GCT CAG GCC			1824
5751	Pro Tyr Leu Val Ala Tyr Gln Ala Thr Val Cys Ala Arg Ala Gln Ala			
5752	595	600	605	
5753				
5754	CCA CCT CCA TCA TGG GAT CAA ATG TGG AAG TGT CTC ATA CGG CTG AAA			1872
5755	Pro Pro Pro Ser Trp Asp Gln Met Trp Lys Cys Leu Ile Arg Leu Lys			
5756	610	615	620	
5757				
5758	CCT ACG CTG CAC GGG CCA ACA CCC TTG CTG TAC AGG CTG GGA GCC GTC			1920
5759	Pro Thr Leu His Gly Pro Thr Pro Leu Leu Tyr Arg Leu Gly Ala Val			
5760	625	630	635	640
5761				
5762	CAA AAT GAG GTC ACC CTC ACC CAC CCC ATA ACC AAA TAC ATC ATG GCA			1968
5763	Gln Asn Glu Val Thr Leu Thr His Pro Ile Thr Lys Tyr Ile Met Ala			
5764	645	650	655	

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:06:57

INPUT SET: S30248.raw

5765
 5766 TGC ATG TCG GCT GAC CTG GAG GTC GTC ACT 1998
 5767 Cys Met Ser Ala Asp Leu Glu Val Val
 5768 660 665 (2) INFORMATION FOR SEQ ID NO:107:
 5769
 5770 (i) SEQUENCE CHARACTERISTICS:
 5771 (A) LENGTH: 1998 base pairs
 5772 (B) TYPE: nucleic acid
 5773 (C) STRANDEDNESS: single
 5774 (D) TOPOLOGY: linear
 5775
 5776 (ii) MOLECULE TYPE: cDNA
 5777
 5778
 5779 (ix) FEATURE:
 5780 (A) NAME/KEY: CDS
 5781 (B) LOCATION: 1..1997
 5782
 5783 (ix) FEATURE:
 5784 (A) NAME/KEY: CDS
 5785 (B) LOCATION: 1..1995
 5786
 5787
 --> 5788 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:107:
 5789
 5790 ATG GGC AGC AGC CAT CAT CAT CAT CAC AGC AGC GGC CTG GTG CCG 48
 5791 Met Gly Ser Ser His His His His His Ser Ser Gly Leu Val Pro
 5792 1 5 10 15
 5793
 5794 CGC GGC AGC CAT ATG GGT TCT GTT ATT GTT GGT AGA ATT ATT TTA 96
 5795 Arg Gly Ser His Met Gly Ser Val Val Ile Val Gly Arg Ile Ile Leu
 5796 20 25 30
 5797
 5798 TCT GGT AGT GGT AGT ATC ACG GCC TAC TCC CAA CAG ACG CGG GGC CTA 144
 5799 Ser Gly Ser Gly Ser Ile Thr Ala Tyr Ser Gln Gln Thr Arg Gly Leu
 5800 35 40 45
 5801
 5802 CTT GGT TGC AAG ATC ACT AGC CTT ACA GGC CGG GAC AAG AAC CAG GTC 192
 5803 Leu Gly Cys Lys Ile Thr Ser Leu Thr Gly Arg Asp Lys Asn Gln Val
 5804 50 55 60
 5805
 5806 GAG GGA GAG GTT CAG GTG GTT TCC ACC GCA ACA CAA TCC TTC CTG GCG 240
 5807 Glu Gly Glu Val Gln Val Val Ser Thr Ala Thr Gln Ser Phe Leu Ala
 5808 65 70 75 80
 5809
 5810 ACC TGC GTC AAC GGC GTG TGT TGG ACC GTT TAC CAT GGT GCT GGC TCA 288
 5811 Thr Cys Val Asn Gly Val Cys Trp Thr Val Tyr His Gly Ala Gly Ser
 5812 85 90 95
 5813
 5814 AAG ACC TTA GCC GGC CCA AAG GGG CCA ATC ACC CAG ATG TAC ACT AAT 336
 5815 Lys Thr Leu Ala Gly Pro Lys Gly Pro Ile Thr Gln Met Tyr Thr Asn
 5816 100 105 110
 5817

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:06:58

INPUT SET: S30248.raw

5818	GTG GAC CAG GAC CTC GTC GGC TGG CAG GCG CCC CCC GGG GCG CGT TCC	384
5819	Val Asp Gln Asp Leu Val Gly Trp Gln Ala Pro Pro Gly Ala Arg Ser	
5820	115 120 125	
5821		
5822	TTG ACA CCA TGC ACC TGT GGC AGC TCA GAC CTT TAC TTG GTC ACG AGA	432
5823	Leu Thr Pro Cys Thr Cys Gly Ser Ser Asp Leu Tyr Leu Val Thr Arg	
5824	130 135 140	
5825		
5826	CAT GCT GAC GTC ATT CCG GTG CGC CGG CGG GGC GAC AGT AGG GGG AGC	480
5827	His Ala Asp Val Ile Pro Val Arg Arg Arg Gly Asp Ser Arg Gly Ser	
5828	145 150 155 160	
5829		
5830	CTG CTC TCC CCC AGG CCT GTC TCC TAC TTG AAG GGC TCT GCT GGT GGT	528
5831	Leu Leu Ser Pro Arg Pro Val Ser Tyr Leu Lys Gly Ser Ala Gly Gly	
5832	165 170 175	
5833		
5834	CCA CTG CTC TGC CCT TCG GGG CAC GCT GTG GGC ATC TTC CGG GCT GCC	576
5835	Pro Leu Leu Cys Pro Ser Gly His Ala Val Gly Ile Phe Arg Ala Ala	
5836	180 185 190	
5837		
5838	GTA TGC ACC CGG GGG GTT GCG AAG GCG GTG GAC TTT GTG CCC GTA GAG	624
5839	Val Cys Thr Arg Gly Val Ala Lys Ala Val Asp Phe Val Pro Val Glu	
5840	195 200 205	
5841		
5842	TCC ATG GAA ACT ACT ATG CGG TCT CCG GTC TTC ACG GAC AAC TCA TCC	672
5843	Ser Met Glu Thr Thr Met Arg Ser Pro Val Phe Thr Asp Asn Ser Ser	
5844	210 215 220	
5845		
5846	CCC CCG GCC GTA CCG CAG TCA TTT CAA GTG GCC CAC CTA CAC GCT CCC	720
5847	Pro Pro Ala Val Pro Gln Ser Phe Gln Val Ala His Leu His Ala Pro	
5848	225 230 235 240	
5849		
5850	ACT GGC AGC GGC AAG AGT ACT AAA GTG CCG GCT GCA TAT GCA GCC CAA	768
5851	Thr Gly Ser Gly Lys Ser Thr Lys Val Pro Ala Ala Tyr Ala Ala Gln	
5852	245 250 255	
5853		
5854	GGG TAC AAG GTG CTC CTC AAT CCG TCC GTT GCC GCT ACC TTA GGG	816
5855	Gly Tyr Lys Val Leu Val Leu Asn Pro Ser Val Ala Ala Thr Leu Gly	
5856	260 265 270	
5857		
5858	TTT GGG GCG TAT ATG TCT AAG GCA CAC GGT ATT GAC CCC AAC ATC AGA	864
5859	Phe Gly Ala Tyr Met Ser Lys Ala His Gly Ile Asp Pro Asn Ile Arg	
5860	275 280 285	
5861		
5862	ACT GGG GTA AGG ACC ATT ACC ACA GGC GCC CCC GTC ACA TAC TCT ACC	912
5863	Thr Gly Val Arg Thr Ile Thr Gly Ala Pro Val Thr Tyr Ser Thr	
5864	290 295 300	
5865		
5866	TAT GGC AAG TTT CTT GCC GAT GGT GGT TGC TCT GGG GGC GCT TAT GAC	960
5867	Tyr Gly Lys Phe Leu Ala Asp Gly Gly Cys Ser Gly Gly Ala Tyr Asp	
5868	305 310 315 320	
5869		
5870	ATC ATA ATA TGT GAT GAG TGC CAT TCA ACT GAC TCG ACT ACA ATC TTG	1008

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:06:58

INPUT SET: S30248.raw

5871	Ile Ile Ile Cys Asp Glu Cys His Ser Thr Asp Ser Thr Thr Ile Leu			
5872	325	330	335	
5873				
5874	GGC ATC GGC ACA GTC CTG GAC CAA GCG GAG ACG GCT GGA GCG CGG CTT		1056	
5875	Gly Ile Gly Thr Val Leu Asp Gln Ala Glu Thr Ala Gly Ala Arg Leu			
5876	340	345	350	
5877				
5878	GTC GTG CTC GCC ACC GCT ACG CCT CCG GGA TCG GTC ACC GTG CCA CAC		1104	
5879	Val Val Leu Ala Thr Ala Thr Pro Pro Gly Ser Val Thr Val Pro His			
5880	355	360	365	
5881				
5882	CCA AAC ATC GAG GAG GTG GCC CTG TCT AAT ACT GGA GAG ATC CCC TTC		1152	
5883	Pro Asn Ile Glu Glu Val Ala Leu Ser Asn Thr Gly Glu Ile Pro Phe			
5884	370	375	380	
5885				
5886	TAT GGC AAA GCC ATC CCC ATT GAA GCC ATC AGG GGG GGA AGG CAT CTC		1200	
5887	Tyr Gly Lys Ala Ile Pro Ile Glu Ala Ile Arg Gly Gly Arg His Leu			
5888	385	390	395	400
5889				
5890	ATT TTC TGT CAT TCC AAG AAG AAG TGC GAC GAG CTC GCC GCA AAG CTG		1248	
5891	Ile Phe Cys His Ser Lys Lys Cys Asp Glu Leu Ala Ala Lys Leu			
5892	405	410	415	
5893				
5894	TCA GGC CTC GGA ATC AAC GCT GTG GCG TAT TAC CGG GGG CTC GAT GTG		1296	
5895	Ser Gly Leu Gly Ile Asn Ala Val Ala Tyr Tyr Arg Gly Leu Asp Val			
5896	420	425	430	
5897				
5898	TCC GTC ATA CCA ACT ATC GGA GAC GTC GTT GTC GTG GCA ACA GAC GCT		1344	
5899	Ser Val Ile Pro Thr Ile Gly Asp Val Val Val Val Val Thr Asp Ala			
5900	435	440	445	
5901				
5902	CTG ATG ACG GGC TAT ACG GGC GAC TTT GAC TCA GTG ATC GAC TGT AAC		1392	
5903	Leu Met Thr Gly Tyr Thr Gly Asp Phe Asp Ser Val Ile Asp Cys Asn			
5904	450	455	460	
5905				
5906	ACA TGT GTC ACC CAG ACA GTC GAC TTC AGC TTG GAT CCC ACC TTC ACC		1440	
5907	Thr Cys Val Thr Gln Thr Val Asp Phe Ser Leu Asp Pro Thr Phe Thr			
5908	465	470	475	480
5909				
5910	ATT GAG ACG ACG ACC GTG CCT CAA GAC GCA GTG TCG CGC TCG CAG CGG		1488	
5911	Ile Glu Thr Thr Val Pro Gln Asp Ala Val Ser Arg Ser Gln Arg			
5912	485	490	495	
5913				
5914	CGG GGT AGG ACT GGC AGG GGT AGG AGA GGC ATC TAC AGG TTT GTG ACT		1536	
5915	Arg Gly Arg Thr Gly Arg Gly Arg Gly Ile Tyr Arg Phe Val Thr			
5916	500	505	510	
5917				
5918	CCG GGA GAA CGG CCC TCG GGC ATG TTC GAT TCC TCG GTC CTG TGT GAG		1584	
5919	Pro Gly Glu Arg Pro Ser Gly Met Phe Asp Ser Ser Val Leu Cys Glu			
5920	515	520	525	
5921				
5922	TGC TAT GAC GCG GGC TGT GCT TGG TAC GAG CTC ACC CCC GCC GAG ACC		1632	
5923	Cys Tyr Asp Ala Gly Cys Ala Trp Tyr Glu Leu Thr Pro Ala Glu Thr			

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

 DATE: 12/09/98
 TIME: 16:06:59
INPUT SET: S30248.raw

5924	530	535	540	
5925				
5926	TCG GTT AGG TTG CGG GCC TAC CTG AAC ACA CCA GGG TTG CCC GTT TGC			1680
5927	Ser Val Arg Leu Arg Ala Tyr Leu Asn Thr Pro Gly Leu Pro Val Cys			
5928	545	550	555	560
5929				
5930	CAG GAC CAC CTG GAG TTC TGG GAG AGT GTC TTC ACA GGC CTC ACC CAT			1728
5931	Gln Asp His Leu Glu Phe Trp Glu Ser Val Phe Thr Gly Leu Thr His			
5932	565	570	575	
5933				
5934	ATA GAT GCA CAC TTC TTG TCC CAG ACC AAG CAG GCA GGA GAC AAC TTC			1776
5935	Ile Asp Ala His Phe Leu Ser Gln Thr Lys Gln Ala Gly Asp Asn Phe			
5936	580	585	590	
5937				
5938	CCC TAC CTG GTA GCA TAC CAA GCC ACG GTG TGC GCC AGG GCT CAG GCC			1824
5939	Pro Tyr Leu Val Ala Tyr Gln Ala Thr Val Cys Ala Arg Ala Gln Ala			
5940	595	600	605	
5941				
5942	CCA CCT CCA TCA TGG GAT CAA ATG TGG AAG TGT CTC ATA CGG CTG AAA			1872
5943	Pro Pro Pro Ser Trp Asp Gln Met Trp Lys Cys Leu Ile Arg Leu Lys			
5944	610	615	620	
5945				
5946	CCT ACG CTG CAC GGG CCA ACA CCC TTG CTG TAC AGG CTG GGA GCC GTC			1920
5947	Pro Thr Leu His Gly Pro Thr Pro Leu Leu Tyr Arg Leu Gly Ala Val			
5948	625	630	635	640
5949				
5950	CAA AAT GAG GTC ACC CTC ACC CAC CCC ATA ACC AAA TAC ATC ATG GCA			1968
5951	Gln Asn Glu Val Thr Leu Thr His Pro Ile Thr Lys Tyr Ile Met Ala			
5952	645	650	655	
5953				
5954	TGC ATG TCG GCT GAC CTG GAG GTC GTC ACT			1998
5955	Cys Met Ser Ala Asp Leu Glu Val Val			
5956	660	665	(2)	INFORMATION FOR SEQ ID NO:108:
5957				
5958	(i) SEQUENCE CHARACTERISTICS:			
5959	(A) LENGTH: 1998 base pairs			
5960	(B) TYPE: nucleic acid			
5961	(C) STRANDEDNESS: single			
5962	(D) TOPOLOGY: linear			
5963				
5964	(ii) MOLECULE TYPE: cDNA			
5965				
5966				
5967				
5968				
5969	(ix) FEATURE:			
5970	(A) NAME/KEY: CDS			
5971	(B) LOCATION: 1..1995			
5972				
5973				
--> 5974	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:108			
5975				
5976	ATG GGC AGC AGC CAT CAT CAT CAT CAC AGC AGC GGC CTG GTG CCG			48

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:07:00

INPUT SET: S30248.raw

5977	Met Gly Ser Ser His His His His His His Ser Ser Gly Leu Val Pro	
5978	1 5 10 15	
5979		
5980	CGC GGC AGC CAT ATG GGT TCT GTT ATT GTT GGT AGA ATT ATT TTA	96
5981	Arg Gly Ser His Met Gly Ser Val Val Ile Val Gly Arg Ile Ile Leu	
5982	20 25 30	
5983		
5984	TCT GGT AGT GGT AGT ATC ACG GCC TAC TCC CAA CAG ACG CGG GGC CTA	144
5985	Ser Gly Ser Gly Ser Ile Thr Ala Tyr Ser Gln Gln Thr Arg Gly Leu	
5986	35 40 45	
5987		
5988	CTT GGT TGC ATC AAG ACT AGC CTT ACA GGC CGG GAC AAG AAC CAG GTC	192
5989	Leu Gly Cys Ile Lys Thr Ser Leu Thr Gly Arg Asp Lys Asn Gln Val	
5990	50 55 60	
5991		
5992	GAG GGA GAG GTT CAG GTG GTT TCC ACC GCA ACA CAA TCC TTC CTG GCG	240
5993	Glu Gly Glu Val Gln Val Val Ser Thr Ala Thr Gln Ser Phe Leu Ala	
5994	65 70 75 80	
5995		
5996	ACC TGC GTC AAC GGC GTG TGT TGG ACC GTT TAC CAT GGT GCT GGC TCA	288
5997	Thr Cys Val Asn Gly Val Cys Trp Thr Val Tyr His Gly Ala Gly Ser	
5998	85 90 95	
5999		
6000	AAG ACC TTA GCC GGC CCA AAG GGG CCA ATC ACC CAG ATG TAC ACT AAT	336
6001	Lys Thr Leu Ala Gly Pro Lys Gly Pro Ile Thr Gln Met Tyr Thr Asn	
6002	100 105 110	
6003		
6004	GTG GAC CAG GAC CTC GTC GGC TGG CAG GCG CCC CCC GGG GCG CGT TCC	384
6005	Val Asp Gln Asp Leu Val Gly Trp Gln Ala Pro Pro Gly Ala Arg Ser	
6006	115 120 125	
6007		
6008	TTG ACA CCA TGC ACC TGT GGC AGC TCA GAC CTT TAC TTG GTC ACG AGA	432
6009	Leu Thr Pro Cys Thr Cys Gly Ser Ser Asp Leu Tyr Leu Val Thr Arg	
6010	130 135 140	
6011		
6012	CAT GCT GAC GTC ATT CCG GTG CGC CGG CGG GGC GAC AGT AGG GGG AGC	480
6013	His Ala Asp Val Ile Pro Val Arg Arg Gly Asp Ser Arg Gly Ser	
6014	145 150 155 160	
6015		
6016	CTG CTC TCC CCC AGG CCT GTC TCC TAC TTG AAG GGC TCT GCT GGT GGT	528
6017	Leu Leu Ser Pro Arg Pro Val Ser Tyr Leu Lys Gly Ser Ala Gly Gly	
6018	165 170 175	
6019		
6020	CCA CTG CTC CCT TCG GGG CAC GCT GTG GGC ATC TTC CGG GCT GCC	576
6021	Pro Leu Leu Cys Pro Ser Gly His Ala Val Gly Ile Phe Arg Ala Ala	
6022	180 185 190	
6023		
6024	GTA TGC ACC CGG GGG GTT GCG AAG GCG GTG GAC TTT GTG CCC GTA GAG	624
6025	Val Cys Thr Arg Gly Val Ala Lys Ala Val Asp Phe Val Pro Val Glu	
6026	195 200 205	
6027		
6028	TCC ATG GAA ACT ACT ATG CGG TCT CCG GTC TTC ACG GAC AAC TCA TCC	672
6029	Ser Met Glu Thr Thr Met Arg Ser Pro Val Phe Thr Asp Asn Ser Ser	

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

 DATE: 12/09/98
 TIME: 16:07:00
INPUT SET: S30248.raw

6030	210	215	220	
6031				
6032	CCC CCG GCC GTA CCG CAG TCA TTT CAA GTG GCC CAC CTA CAC GCT CCC			720
6033	Pro Pro Ala Val Pro Gln Ser Phe Gln Val Ala His Leu His Ala Pro			
6034	225	230	235	240
6035				
6036	ACT GGC AGC GGC AAG AGT ACT AAA GTG CCG GCT GCA TAT GCA GCC CAA			768
6037	Thr Gly Ser Gly Lys Ser Thr Lys Val Pro Ala Ala Tyr Ala Ala Gln			
6038	245	250	255	
6039				
6040	GGG TAC AAG GTG CTC GTC CTC AAT CCG TCC GTT GCC GCT ACC TTA GGG			816
6041	Gly Tyr Lys Val Leu Val Leu Asn Pro Ser Val Ala Ala Thr Leu Gly			
6042	260	265	270	
6043				
6044	TTT GGG GCG TAT ATG TCT AAG GCA CAC GGT ATT GAC CCC AAC ATC AGA			864
6045	Phe Gly Ala Tyr Met Ser Lys Ala His Gly Ile Asp Pro Asn Ile Arg			
6046	275	280	285	
6047				
6048	ACT GGG GTA AGG ACC ATT ACC ACA GGC GCC CCC GTC ACA TAC TCT ACC			912
6049	Thr Gly Val Arg Thr Ile Thr Thr Gly Ala Pro Val Thr Tyr Ser Thr			
6050	290	295	300	
6051				
6052	TAT GGC AAG TTT CTT GCC GAT GGT GGT TGC TCT GGG GGC GCT TAT GAC			960
6053	Tyr Gly Lys Phe Leu Ala Asp Gly Gly Cys Ser Gly Gly Ala Tyr Asp			
6054	305	310	315	320
6055				
6056	ATC ATA ATA TGT GAT GAG TGC CAT TCA ACT GAC TCG ACT ACA ATC TTG			1008
6057	Ile Ile Ile Cys Asp Glu Cys His Ser Thr Asp Ser Thr Thr Ile Leu			
6058	325	330	335	
6059				
6060	GGC ATC GGC ACA GTC CTG GAC CAA GCG GAG ACG GCT GGA GCG CGG CTT			1056
6061	Gly Ile Gly Thr Val Leu Asp Gln Ala Glu Thr Ala Gly Ala Arg Leu			
6062	340	345	350	
6063				
6064	GTC GTG CTC GCC ACC GCT ACG CCT CCG GGA TCG GTC ACC GTG CCA CAC			1104
6065	Val Val Leu Ala Thr Ala Thr Pro Pro Gly Ser Val Thr Val Pro His			
6066	355	360	365	
6067				
6068	CCA AAC ATC GAG GAG GTG GCC CTG TCT AAT ACT GGA GAG ATC CCC TTC			1152
6069	Pro Asn Ile Glu Glu Val Ala Leu Ser Asn Thr Gly Glu Ile Pro Phe			
6070	370	375	380	
6071				
6072	TAT GGC AAA GCC ATC CCC ATT GAA GCC ATC AGG GGG GGA AGG CAT CTC			1200
6073	Tyr Gly Lys Ala Ile Pro Ile Glu Ala Ile Arg Gly Gly Arg His Leu			
6074	385	390	395	400
6075				
6076	ATT TTC TGT CAT TCC AAG AAG AAG TGC GAC GAG CTC GCC GCA AAG CTG			1248
6077	Ile Phe Cys His Ser Lys Lys Cys Asp Glu Leu Ala Ala Lys Leu			
6078	405	410	415	
6079				
6080	TCA GGC CTC GGA ATC AAC GCT GTG GCG TAT TAC CGG GGG CTC GAT GTG			1296
6081	Ser Gly Leu Gly Ile Asn Ala Val Ala Tyr Tyr Arg Gly Leu Asp Val			
6082	420	425	430	

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

 DATE: 12/09/98
 TIME: 16:07:01
INPUT SET: S30248.raw

6083					
6084	TCC GTC ATA CCA ACT ATC GGA GAC GTC GTT GTC GTG GCA ACA GAC GCT				1344
6085	Ser Val Ile Pro Thr Ile Gly Asp Val Val Val Val Ala Thr Asp Ala				
6086	435	440	445		
6087					
6088	CTG ATG ACG GGC TAT ACG GGC GAC TTT GAC TCA GTG ATC GAC TGT AAC				1392
6089	Leu Met Thr Gly Tyr Thr Gly Asp Phe Asp Ser Val Ile Asp Cys Asn				
6090	450	455	460		
6091					
6092	ACA TGT GTC ACC CAG ACA GTC GAC TTC AGC TTG GAT CCC ACC TTC ACC				1440
6093	Thr Cys Val Thr Gln Thr Val Asp Phe Ser Leu Asp Pro Thr Phe Thr				
6094	465	470	475	480	
6095					
6096	ATT GAG ACG ACG ACC GTG CCT CAA GAC GCA GTG TCG CGC TCG CAG CGG				1488
6097	Ile Glu Thr Thr Val Pro Gln Asp Ala Val Ser Arg Ser Gln Arg				
6098	485	490	495		
6099					
6100	CGG GGT AGG ACT GGC AGG GGT AGG AGA GGC ATC TAC AGG TTT GTG ACT				1536
6101	Arg Gly Arg Thr Gly Arg Gly Arg Gly Ile Tyr Arg Phe Val Thr				
6102	500	505	510		
6103					
6104	CCG GGA GAA CGG CCC TCG GGC ATG TTC GAT TCC TCG GTC CTG TGT GAG				1584
6105	Pro Gly Glu Arg Pro Ser Gly Met Phe Asp Ser Ser Val Leu Cys Glu				
6106	515	520	525		
6107					
6108	TGC TAT GAC GCG GGC TGT GCT TGG TAC GAG CTC ACC CCC GCC GAG ACC				1632
6109	Cys Tyr Asp Ala Gly Cys Ala Trp Tyr Glu Leu Thr Pro Ala Glu Thr				
6110	530	535	540		
6111					
6112	TCG GTT AGG TTG CGG GCC TAC CTG AAC ACA CCA GGG TTG CCC GTT TGC				1680
6113	Ser Val Arg Leu Arg Ala Tyr Leu Asn Thr Pro Gly Leu Pro Val Cys				
6114	545	550	555	560	
6115					
6116	CAG GAC CAC CTG GAG TTC TGG GAG AGT GTC TTC ACA GGC CTC ACC CAT				1728
6117	Gln Asp His Leu Glu Phe Trp Glu Ser Val Phe Thr Gly Leu Thr His				
6118	565	570	575		
6119					
6120	ATA GAT GCA CAC TTC TTG TCC CAG ACC AAG CAG GCA GGA GAC AAC TTC				1776
6121	Ile Asp Ala His Phe Leu Ser Gln Thr Lys Gln Ala Gly Asp Asn Phe				
6122	580	585	590		
6123					
6124	CCC TAC CTG GTA GCA TAC CAA GCC ACG GTG TGC GCC AGG GCT CAG GCC				1824
6125	Pro Tyr Leu Val Ala Tyr Gln Ala Thr Val Cys Ala Arg Ala Gln Ala				
6126	595	600	605		
6127					
6128	CCA CCT CCA TCA TGG GAT CAA ATG TGG AAG TGT CTC ATA CGG CTG AAA				1872
6129	Pro Pro Pro Ser Trp Asp Gln Met Trp Lys Cys Leu Ile Arg Leu Lys				
6130	610	615	620		
6131					
6132	CCT ACG CTG CAC GGG CCA ACA CCC TTG CTG TAC AGG CTG GGA GCC GTC				1920
6133	Pro Thr Leu His Gly Pro Thr Pro Leu Leu Tyr Arg Leu Gly Ala Val				
6134	625	630	635	640	
6135					

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:07:02

INPUT SET: S30248.raw

6136 CAA AAT GAG GTC ACC CTC ACC CAC CCC ATA ACC AAA TAC ATC ATG GCA 1968
 6137 Gln Asn Glu Val Thr Leu Thr His Pro Ile Thr Lys Tyr Ile Met Ala
 6138 645 650 655

6139
 6140 TGC ATG TCG GCT GAC CTG GAG GTC GTC ACT 1998
 6141 Cys Met Ser Ala Asp Leu Glu Val Val
 6142 660 665 (2) INFORMATION FOR SEQ ID NO:109:

6143

(i) SEQUENCE CHARACTERISTICS:

6145 (A) LENGTH: 1998 base pairs
 6146 (B) TYPE: nucleic acid
 6147 (C) STRANDEDNESS: single
 6148 (D) TOPOLOGY: linear

6149

6150 (ii) MOLECULE TYPE: cDNA

6151

6152

6153 (ix) FEATURE:

6154 (A) NAME/KEY: CDS
 6155 (B) LOCATION: 1..1997

6156

6157 (ix) FEATURE:

6158 (A) NAME/KEY: CDS
 6159 (B) LOCATION: 1..1995

6160

6161

--> 6162

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:109:

6163

6164 ATG GGC AGC AGC CAT CAT CAT CAT CAC AGC AGC GGC CTG GTG CCG 48
 6165 Met Gly Ser Ser His His His His His Ser Ser Gly Leu Val Pro
 6166 1 5 10 15

6167

6168 CGC GGC AGC CAT ATG GGT TCT GTT ATT GTT GGT AGA ATT ATT TTA 96
 6169 Arg Gly Ser His Met Gly Ser Val Val Ile Val Gly Arg Ile Ile Leu
 6170 20 25 30

6171

6172 TCT GGT AGT GGT AGT ATC ACG GCC TAC TCC CAA CAG ACG CGG GGC CTA 144
 6173 Ser Gly Ser Gly Ser Ile Thr Ala Tyr Ser Gln Gln Thr Arg Gly Leu
 6174 35 40 45

6175

6176 CTT GGT TGC AAG AAG ACT AGC CTT ACA GGC CGG GAC AAG AAC CAG GTC 192
 6177 Leu Gly Cys Lys Lys Thr Ser Leu Thr Gly Arg Asp Lys Asn Gln Val
 6178 50 55 60

6179

6180 GAG GGA GAG GTT CAG GTG GTT TCC ACC GCA ACA CAA TCC TTC CTG GCG 240
 6181 Glu Gly Glu Val Gln Val Val Ser Thr Ala Thr Gln Ser Phe Leu Ala
 6182 65 70 75 80

6183

6184 ACC TGC GTC AAC GGC GTG TGT TGG ACC GTT TAC CAT GGT GCT GGC TCA 288
 6185 Thr Cys Val Asn Gly Val Cys Trp Thr Val Tyr His Gly Ala Gly Ser
 6186 85 90 95

6187

6188 AAG ACC TTA GCC GGC CCA AAG GGG CCA ATC ACC CAG ATG TAC ACT AAT 336

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

 DATE: 12/09/98
 TIME: 16:07:02
INPUT SET: S30248.raw

6189	Lys Thr Leu Ala Gly Pro Lys Gly Pro Ile Thr Gln Met Tyr Thr Asn			
6190	100	105	110	
6191				
6192	GTG GAC CAG GAC CTC GTC GGC TGG CAG GCG CCC CCC GGG GCG CGT TCC	384		
6193	Val Asp Gln Asp Leu Val Gly Trp Gln Ala Pro Pro Gly Ala Arg Ser			
6194	115	120	125	
6195				
6196	TTG ACA CCA TGC ACC TGT GGC AGC TCA GAC CTT TAC TTG GTC ACG AGA	432		
6197	Leu Thr Pro Cys Thr Cys Gly Ser Ser Asp Leu Tyr Leu Val Thr Arg			
6198	130	135	140	
6199				
6200	CAT GCT GAC GTC ATT CCG GTG CGC CGG CGG GGC GAC AGT AGG GGG AGC	480		
6201	His Ala Asp Val Ile Pro Val Arg Arg Arg Gly Asp Ser Arg Gly Ser			
6202	145	150	155	160
6203				
6204	CTG CTC TCC CCC AGG CCT GTC TCC TAC TTG AAG GGC TCT GCT GGT GGT	528		
6205	Leu Leu Ser Pro Arg Pro Val Ser Tyr Leu Lys Gly Ser Ala Gly Gly			
6206	165	170	175	
6207				
6208	CCA CTG CTC TGC CCT TCG GGG CAC GCT GTG GGC ATC TTC CGG GCT GCC	576		
6209	Pro Leu Leu Cys Pro Ser Gly His Ala Val Gly Ile Phe Arg Ala Ala			
6210	180	185	190	
6211				
6212	GTA TGC ACC CGG GGG GTT GCG AAG GCG GTG GAC TTT GTG CCC GTA GAG	624		
6213	Val Cys Thr Arg Gly Val Ala Lys Ala Val Asp Phe Val Pro Val Glu			
6214	195	200	205	
6215				
6216	TCC ATG GAA ACT ACT ATG CGG TCT CCG GTC TTC ACG GAC AAC TCA TCC	672		
6217	Ser Met Glu Thr Thr Met Arg Ser Pro Val Phe Thr Asp Asn Ser Ser			
6218	210	215	220	
6219				
6220	CCC CCG GCC GTA CCG CAG TCA TTT CAA GTG GCC CAC CTA CAC GCT CCC	720		
6221	Pro Pro Ala Val Pro Gln Ser Phe Gln Val Ala His Leu His Ala Pro			
6222	225	230	235	240
6223				
6224	ACT GGC AGC GGC AAG AGT ACT AAA GTG CCG GCT GCA TAT GCA GCC CAA	768		
6225	Thr Gly Ser Gly Ser Thr Lys Val Pro Ala Ala Tyr Ala Ala Gln			
6226	245	250	255	
6227				
6228	GGG TAC AAG GTG CTC GTC CTC AAT CCG TCC GTT GCC GCT ACC TTA GGG	816		
6229	Gly Tyr Lys Val Leu Val Leu Asn Pro Ser Val Ala Ala Thr Leu Gly			
6230	260	265	270	
6231				
6232	TTT GGG GCG TAT ATG TCT AAG GCA CAC GGT ATT GAC CCC AAC ATC AGA	864		
6233	Phe Gly Ala Tyr Met Ser Lys Ala His Gly Ile Asp Pro Asn Ile Arg			
6234	275	280	285	
6235				
6236	ACT GGG GTA AGG ACC ATT ACC ACA GGC GCC CCC GTC ACA TAC TCT ACC	912		
6237	Thr Gly Val Arg Thr Ile Thr Gly Ala Pro Val Thr Tyr Ser Thr			
6238	290	295	300	
6239				
6240	TAT GGC AAG TTT CTT GCC GAT GGT GGT TGC TCT GGG GGC GCT TAT GAC	960		
6241	Tyr Gly Lys Phe Leu Ala Asp Gly Gly Cys Ser Gly Gly Ala Tyr Asp			

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

 DATE: 12/09/98
 TIME: 16:07:03
INPUT SET: S30248.raw

6242	305	310	315	320	
6243					
6244	ATC ATA ATA TGT GAT GAG TGC CAT TCA ACT GAC TCG ACT ACA ATC TTG				1008
6245	Ile Ile Ile Cys Asp Glu Cys His Ser Thr Asp Ser Thr Thr Ile Leu				
6246	325	330	335		
6247					
6248	GGC ATC GGC ACA GTC CTG GAC CAA GCG GAG ACG GCT GGA GCG CGG CTT				1056
6249	Gly Ile Gly Thr Val Leu Asp Gln Ala Glu Thr Ala Gly Ala Arg Leu				
6250	340	345	350		
6251					
6252	GTC GTG CTC GCC ACC GCT ACG CCT CCG GGA TCG GTC ACC GTG CCA CAC				1104
6253	Val Val Leu Ala Thr Ala Thr Pro Pro Gly Ser Val Thr Val Pro His				
6254	355	360	365		
6255					
6256	CCA AAC ATC GAG GAG GTG GCC CTG TCT AAT ACT GGA GAG ATC CCC TTC				1152
6257	Pro Asn Ile Glu Glu Val Ala Leu Ser Asn Thr Gly Glu Ile Pro Phe				
6258	370	375	380		
6259					
6260	TAT GGC AAA GCC ATC CCC ATT GAA GCC ATC AGG GGG GGA AGG CAT CTC				1200
6261	Tyr Gly Lys Ala Ile Pro Ile Glu Ala Ile Arg Gly Gly Arg His Leu				
6262	385	390	395	400	
6263					
6264	ATT TTC TGT CAT TCC AAG AAG AAG TGC GAC GAG CTC GCC GCA AAG CTG				1248
6265	Ile Phe Cys His Ser Lys Lys Lys Cys Asp Glu Leu Ala Ala Lys Leu				
6266	405	410	415		
6267					
6268	TCA GGC CTC GGA ATC AAC GCT GTG GCG TAT TAC CGG GGG CTC GAT GTG				1296
6269	Ser Gly Leu Gly Ile Asn Ala Val Ala Tyr Tyr Arg Gly Leu Asp Val				
6270	420	425	430		
6271					
6272	TCC GTC ATA CCA ACT ATC GGA GAC GTC GTT GTC GTG GCA ACA GAC GCT				1344
6273	Ser Val Ile Pro Thr Ile Gly Asp Val Val Val Val Ala Thr Asp Ala				
6274	435	440	445		
6275					
6276	CTG ATG ACG GGC TAT ACG GGC GAC TTT GAC TCA GTG ATC GAC TGT AAC				1392
6277	Leu Met Thr Gly Tyr Thr Gly Asp Phe Asp Ser Val Ile Asp Cys Asn				
6278	450	455	460		
6279					
6280	ACA TGT GTC ACC CAG ACA GTC GAC TTC AGC TTG GAT CCC ACC TTC ACC				1440
6281	Thr Cys Val Thr Gln Thr Val Asp Phe Ser Leu Asp Pro Thr Phe Thr				
6282	465	470	475	480	
6283					
6284	ATT GAG ACG ACG ACC GTG CCT CAA GAC GCA GTG TCG CGC TCG CAG CGG				1488
6285	Ile Glu Thr Thr Val Pro Gln Asp Ala Val Ser Arg Ser Gln Arg				
6286	485	490	495		
6287					
6288	CGG GGT AGG ACT GGC AGG GGT AGG AGA GGC ATC TAC AGG TTT GTG ACT				1536
6289	Arg Gly Arg Thr Gly Arg Gly Arg Gly Ile Tyr Arg Phe Val Thr				
6290	500	505	510		
6291					
6292	CCG GGA GAA CGG CCC TCG GGC ATG TTC GAT TCC TCG GTC CTG TGT GAG				1584
6293	Pro Gly Glu Arg Pro Ser Gly Met Phe Asp Ser Ser Val Leu Cys Glu				
6294	515	520	525		

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:07:04

INPUT SET: S30248.raw

6295	TGC TAT GAC GCG GGC TGT GCT TGG TAC GAG CTC ACC CCC GCC GAG ACC		1632
6296	Cys Tyr Asp Ala Gly Cys Ala Trp Tyr Glu Leu Thr Pro Ala Glu Thr		
6297	530 535 540		
6298			
6299			
6300	TCG GTT AGG TTG CGG GCC TAC CTG AAC ACA CCA GGG TTG CCC GTT TGC		1680
6301	Ser Val Arg Leu Arg Ala Tyr Leu Asn Thr Pro Gly Leu Pro Val Cys		
6302	545 550 555 560		
6303			
6304	CAG GAC CAC CTG GAG TTC TGG GAG AGT GTC TTC ACA GGC CTC ACC CAT		1728
6305	Gln Asp His Leu Glu Phe Trp Glu Ser Val Phe Thr Gly Leu Thr His		
6306	565 570 575		
6307			
6308	ATA GAT GCA CAC TTC TTG TCC CAG ACC AAG CAG GCA GGA GAC AAC TTC		1776
6309	Ile Asp Ala His Phe Leu Ser Gln Thr Lys Gln Ala Gly Asp Asn Phe		
6310	580 585 590		
6311			
6312	CCC TAC CTG GTA GCA TAC CAA GCC ACG GTG TGC GCC AGG GCT CAG GCC		1824
6313	Pro Tyr Leu Val Ala Tyr Gln Ala Thr Val Cys Ala Arg Ala Gln Ala		
6314	595 600 605		
6315			
6316	CCA CCT CCA TCA TGG GAT CAA ATG TGG AAG TGT CTC ATA CGG CTG AAA		1872
6317	Pro Pro Pro Ser Trp Asp Gln Met Trp Lys Cys Leu Ile Arg Leu Lys		
6318	610 615 620		
6319			
6320	CCT ACG CTG CAC GGG CCA ACA CCC TTG CTG TAC AGG CTG GGA GCC GTC		1920
6321	Pro Thr Leu His Gly Pro Thr Pro Leu Leu Tyr Arg Leu Gly Ala Val		
6322	625 630 635 640		
6323			
6324	CAA AAT GAG GTC ACC CTC ACC CAC CCC ATA ACC AAA TAC ATC ATG GCA		1968
6325	Gln Asn Glu Val Thr Leu Thr His Pro Ile Thr Lys Tyr Ile Met Ala		
6326	645 650 655		
6327			
6328	TGC ATG TCG GCT GAC CTG GAG GTC GTC ACT		1998
6329	Cys Met Ser Ala Asp Leu Glu Val Val		
6330	660 665		

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 2016 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: sim

(ii) MOLECULE TYPE: cDNA

6339

6340

6341

6342

6343

6344

6345

6346

6347

(ix) FEATURE:

(A) NAME/KEY: CDS

(B) LOCATION: 1., 2013

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

 DATE: 12/09/98
 TIME: 16:07:04
INPUT SET: S30248.raw

--> **6348 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:110:**

6349	ATG GGC AGC AGC CAT CAT CAT CAT CAC AGC AGC GGC CTG GTG CCG	48
6350	Met Gly Ser Ser His His His His His Ser Ser Gly Leu Val Pro	
6351	1 5 10 15	
6353	CGC GGC AGC CAT ATG GCT TAC TCT CTG ACT ACG GGT TCT GTT GTT ATT	96
6354	Arg Gly Ser His Met Ala Tyr Ser Leu Thr Thr Gly Ser Val Val Ile	
6355	20 25 30	
6357	GTT GGT AGA ATT ATT TTA TCT GGT AGT GGT AGT ATC ACG GCC TAC TCC	144
6358	Val Gly Arg Ile Ile Leu Ser Gly Ser Gly Ser Ile Thr Ala Tyr Ser	
6359	35 40 45	
6361	CAA CAG ACG CGG GGC CTA CTT GGT TGC ATC ATC ACT AGC CTT ACA GGC	192
6362	Gln Gln Thr Arg Gly Leu Leu Gly Cys Ile Ile Thr Ser Leu Thr Gly	
6363	50 55 60	
6365	CGG GAC AAG AAC CAG GTC GAG GGA GAG GTT CAG GTG GTT TCC ACC GCA	240
6366	Arg Asp Lys Asn Gln Val Glu Gly Glu Val Gln Val Val Ser Thr Ala	
6367	65 70 75 80	
6369	ACA CAA TCC TTC CTG GCG ACC TGC GTC AAC GGC GTG TGT TGG ACC GTT	288
6370	Thr Gln Ser Phe Leu Ala Thr Cys Val Asn Gly Val Cys Trp Thr Val	
6371	85 90 95	
6373	TAC CAT GGT GCT GGC TCA AAG ACC TTA GCC GGC CCA AAG GGG CCA ATC	336
6374	Tyr His Gly Ala Gly Ser Lys Thr Leu Ala Gly Pro Lys Gly Pro Ile	
6375	100 105 110	
6377	ACC CAG ATG TAC ACT AAT GTG GAC CAG GAC CTC GTC GGC TGG CAG GCG	384
6378	Thr Gln Met Tyr Thr Asn Val Asp Gln Asp Leu Val Gly Trp Gln Ala	
6379	115 120 125	
6381	CCC CCC GGG GCG CGT TCC TTG ACA CCA TGC ACC TGT GGC AGC TCA GAC	432
6382	Pro Pro Gly Ala Arg Ser Leu Thr Pro Cys Thr Cys Gly Ser Ser Asp	
6383	130 135 140	
6385	CTT TAC TTG GTC ACG AGA CAT GCT GAC GTC ATT CCG GTG CGC CGG CGG	480
6386	Leu Tyr Leu Val Thr Arg His Ala Asp Val Ile Pro Val Arg Arg Arg	
6387	145 150 155 160	
6389	GGC GAC AGT AGG GGG AGC CTG CTC TCC CCC AGG CCT GTC TCC TAC TTG	528
6390	Gly Asp Ser Arg Gly Ser Leu Leu Ser Pro Arg Pro Val Ser Tyr Leu	
6391	165 170 175	
6393	AAG GGC TCT TCG GGT GGT CCA CTG CTC TGC CCT TCG GGG CAC GCT GTG	576
6394	Lys Gly Ser Ser Gly Gly Pro Leu Leu Cys Pro Ser Gly His Ala Val	
6395	180 185 190	
6397	GGC ATC TTC CGG GCT GCC GTA TGC ACC CGG GGG GTT GCG AAG GCG GTG	624
6398	Gly Ile Phe Arg Ala Ala Val Cys Thr Arg Gly Val Ala Lys Ala Val	
6399	195 200 205	
6400		

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:07:05

INPUT SET: S30248.raw

6401	GAC TTT GTG CCC GTA GAG TCC ATG GAA ACT ACT ATG CGG TCT CCG GTC	672
6402	Asp Phe Val Pro Val Glu Ser Met Glu Thr Thr Met Arg Ser Pro Val	
6403	210 215 220	
6404		
6405		
6406	TTC ACG GAC AAC TCA TCC CCC CCG GCC GTA CCG CAG TCA TTT CAA GTG	720
6407	Phe Thr Asp Asn Ser Ser Pro Pro Ala Val Pro Gln Ser Phe Gln Val	
6408	225 230 235 240	
6409		
6410	GCC CAC CTA CAC GCT CCC ACT GGC AGC GGC AAG AGT ACT AAA GTG CCG	768
6411	Ala His Leu His Ala Pro Thr Gly Ser Gly Lys Ser Thr Lys Val Pro	
6412	245 250 255	
6413		
6414	GCT GCA TAT GCA GCC CAA GGG TAC AAG GTG CTC GTC CTC AAT CCG TCC	816
6415	Ala Ala Tyr Ala Ala Gln Gly Tyr Lys Val Leu Val Leu Asn Pro Ser	
6416	260 265 270	
6417		
6418	GTT GCC GCT ACC TTA GGG TTT GGG GCG TAT ATG TCT AAG GCA CAC GGT	864
6419	Val Ala Ala Thr Leu Gly Phe Gly Ala Tyr Met Ser Lys Ala His Gly	
6420	275 280 285	
6421		
6422	ATT GAC CCC AAC ATC AGA ACT GGG GTA AGG ACC ATT ACC ACA GGC GCC	912
6423	Ile Asp Pro Asn Ile Arg Thr Gly Val Arg Thr Ile Thr Thr Gly Ala	
6424	290 295 300	
6425		
6426	CCC GTC ACA TAC TCT ACC TAT GGC AAG TTT CTT GCC GAT GGT GGT TGC	960
6427	Pro Val Thr Tyr Ser Thr Tyr Gly Lys Phe Leu Ala Asp Gly Gly Cys	
6428	305 310 315 320	
6429		
6430	TCT GGG GGC GCT TAT GAC ATC ATA ATA TGT GAT GAG TGC CAT TCA ACT	1008
6431	Ser Gly Gly Ala Tyr Asp Ile Ile Cys Asp Glu Cys His Ser Thr	
6432	325 330 335	
6433		
6434	GAC TCG ACT ACA ATC TTG GGC ATC GGC ACA GTC CTG GAC CAA GCG GAG	1056
6435	Asp Ser Thr Thr Ile Leu Gly Ile Gly Thr Val Leu Asp Gln Ala Glu	
6436	340 345 350	
6437		
6438	ACG GCT GGA GCG CGG CTT GTC GTG CTC GCC ACC GCT ACG CCT CCG GGA	1104
6439	Thr Ala Gly Ala Arg Leu Val Val Leu Ala Thr Ala Thr Pro Pro Gly	
6440	355 360 365	
6441		
6442	TCG GTC ACC GTG CCA CAC CCA AAC ATC GAG GAG GTG GCC CTG TCT AAT	1152
6443	Ser Val Thr Val Pro His Pro Asn Ile Glu Glu Val Ala Leu Ser Asn	
6444	370 375 380	
6445		
6446	ACT GGA GAG ATC CCC TTC TAT GGC AAA GCC ATC CCC ATT GAA GCC ATC	1200
6447	Thr Gly Glu Ile Pro Phe Tyr Gly Lys Ala Ile Pro Ile Glu Ala Ile	
6448	385 390 395 400	
6449		
6450	AGG GGG GGA AGG CAT CTC ATT TTC TGT CAT TCC AAG AAG AAG TGC GAC	1248
6451	Arg Gly Gly Arg His Leu Ile Phe Cys His Ser Lys Lys Lys Cys Asp	
6452	405 410 415	
6453		

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

 DATE: 12/09/98
 TIME: 16:07:06
INPUT SET: S30248.raw

6454	GAG CTC GCC GCA AAG CTG TCA GGC CTC GGA ATC AAC GCT GTG GCG TAT	1296
6455	Glu Leu Ala Ala Lys Leu Ser Gly Leu Gly Ile Asn Ala Val Ala Tyr	
6456	420	425
6457		430
6458	TAC CGG GGG CTC GAT GTG TCC GTC ATA CCA ACT ATC GGA GAC GTC GTT	1344
6459	Tyr Arg Gly Leu Asp Val Ser Val Ile Pro Thr Ile Gly Asp Val Val	
6460	435	440
6461		445
6462	GTC GTG GCA ACA GAC GCT CTG ATG ACG GGC TAT ACG GGC GAC TTT GAC	1392
6463	Val Val Ala Thr Asp Ala Leu Met Thr Gly Tyr Thr Gly Asp Phe Asp	
6464	450	455
6465		460
6466	TCA GTG ATC GAC TGT AAC ACA TGT GTC ACC CAG ACA GTC GAC TTC AGC	1440
6467	Ser Val Ile Asp Cys Asn Thr Cys Val Thr Gln Thr Val Asp Phe Ser	
6468	465	470
6469		475
6470	TTG GAT CCC ACC TTC ACC ATT GAG ACG ACG ACC GTG CCT CAA GAC GCA	1488
6471	Leu Asp Pro Thr Phe Thr Ile Glu Thr Thr Thr Val Pro Gln Asp Ala	
6472	485	490
6473		495
6474	TTG TCG CGC TCG CAG CGG CGG GGT AGG ACT GGC AGG GGT AGG AGA GGC	1536
6475	Val Ser Arg Ser Gln Arg Arg Gly Arg Thr Gly Arg Gly Arg Arg Gly	
6476	500	505
6477		510
6478	GTG TCG CGC TCG CAG CGG CGG GGT AGG ACT GGC AGG GGT AGG AGA GGC	1584
6479	Ile Tyr Arg Phe Val Thr Pro Gly Glu Arg Pro Ser Gly Met Phe Asp	
6480	515	520
6481		525
6482	ATC TAC AGG TTT GTG ACT CCG GGA GAA CGG CCC TCG GGC ATG TTC GAT	1632
6483	Ser Ser Val Leu Cys Glu Cys Tyr Asp Ala Gly Cys Ala Trp Tyr Glu	
6484	530	535
6485		540
6486	TCC TCG GTC CTG TGT GAG TGC TAT GAC GCG GGC TGT GCT TGG TAC GAG	1680
6487	Leu Thr Pro Ala Glu Thr Ser Val Arg Leu Arg Ala Tyr Leu Asn Thr	
6488	545	550
6489		555
6490	560	560
6491	CTC ACC CCC GCC GAG ACC TCG GTT AGG TTG CGG GCC TAC CTG AAC ACA	1728
6492	Leu Thr Pro Ala Glu Thr Ser Val Arg Leu Arg Ala Tyr Leu Asn Thr	
6493	565	570
6494	575	575
6495	CCA GGG TTG CCC GTT TGC CAG GAC CAC CTG GAG TTC TGG GAG AGT GTC	
6496	Pro Gly Leu Pro Val Cys Gln Asp His Leu Glu Phe Trp Glu Ser Val	
6497	580	585
6498		590
6499	TTC ACA GGC CTC ACC CAT ATA GAT GCA CAC TTC TTG TCC CAG ACC AAG	1776
6500	Phe Thr Gly Leu Thr His Ile Asp Ala His Phe Leu Ser Gln Thr Lys	
6501	595	600
6502		605
6503	CAG GCA GGA GAC AAC TTC CCC TAC CTG GTA GCA TAC CAA GCC ACG GTG	1824
6504	Gln Ala Gly Asp Asn Phe Pro Tyr Leu Val Ala Tyr Gln Ala Thr Val	
6505	610	615
6506		620
	TGT CTC ATA CGG CTG AAA CCT ACG CTG CAC GGG CCA ACA CCC TTG CTG	1920

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:07:07

INPUT SET: S30248.raw

6507	Cys Leu Ile Arg Leu Lys Pro Thr Leu His Gly Pro Thr Pro Leu Leu			
6508	625	630	635	640
6509				
6510	TAC AGG CTG GGA GCC GTC CAA AAT GAG GTC ACC CTC ACC CAC CCC ATA			1968
6511	Tyr Arg Leu Gly Ala Val Gln Asn Glu Val Thr Leu Thr His Pro Ile			
6512	645	650	655	
6513				
6514	ACC AAA TAC ATC ATG GCA TGC ATG TCG GCT GAC CTG GAG GTC GTC			2013
6515	Thr Lys Tyr Ile Met Ala Cys Met Ser Ala Asp Leu Glu Val Val			
6516	660	665	670	
6517				
6518	ACT			2016(2) INFORM
6519				
6520	(i) SEQUENCE CHARACTERISTICS:			
--> 6521	(A) LENGTH: 2016 base pairs			
6522	(B) TYPE: nucleic acid			
6523	(C) STRANDEDNESS: single			
6524	(D) TOPOLOGY: linear			
6525				
6526	(ii) MOLECULE TYPE: cDNA			
6527				
6528				
6529	(ix) FEATURE:			
6530	(A) NAME/KEY: CDS			
6531	(B) LOCATION: 1..2013			
6532				
6533				
--> 6534	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:111:			
6535				
6536	ATG GGC AGC AGC CAT CAT CAT CAT CAT CAC AGC AGC GGC CTG GTG CCG			48
6537	Met Gly Ser Ser His His His His His His Ser Ser Gly Leu Val Pro			
6538	1	5	10	15
6539				
6540	CGC GGC AGC CAT ATG GCT TAC TCT CTG ACT ACG GGT TCT GTT ATT			96
6541	Arg Gly Ser His Met Ala Tyr Ser Leu Thr Thr Gly Ser Val Val Ile			
6542	20	25	30	
6543				
6544	GTT GGT AGA ATT ATT TTA TCT GGT AGT GGT ATC ACG GCC TAC TCC			144
6545	Val Gly Arg Ile Ile Leu Ser Gly Ser Gly Ser Ile Thr Ala Tyr Ser			
6546	35	40	45	
6547				
6548	CAA CAG ACG CGG GGC CTA CTT GGT TGC ATC ATC ACT AGC CTT ACA GGC			192
6549	Gln Gln Thr Arg Gly Leu Leu Gly Cys Ile Ile Thr Ser Leu Thr Gly			
6550	50	55	60	
6551				
6552	CGG GAC AAG AAC CAG GTC GAG GGA GAG GTT CAG GTG GTT TCC ACC GCA			240
6553	Arg Asp Lys Asn Gln Val Glu Gly Glu Val Gln Val Val Ser Thr Ala			
6554	65	70	75	80
6555				
6556	ACA CAA TCC TTC CTG GCG ACC TGC GTC AAC GGC GTG TGT TGG ACC GTT			288
6557	Thr Gln Ser Phe Leu Ala Thr Cys Val Asn Gly Val Cys Trp Thr Val			
6558	85	90	95	
6559				

hard return

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

 DATE: 12/09/98
 TIME: 16:07:07
INPUT SET: S30248.raw

6560	TAC CAT GGT GCT GGC TCA AAG ACC TTA GCC GGC CCA AAG GGG CCA ATC	336
6561	Tyr His Gly Ala Gly Ser Lys Thr Leu Ala Gly Pro Lys Gly Pro Ile	
6562	100 105 110	
6563		
6564	ACC CAG ATG TAC ACT AAT GTG GAC CAG GAC CTC GTC GGC TGG CAG GCG	384
6565	Thr Gln Met Tyr Thr Asn Val Asp Gln Asp Leu Val Gly Trp Gln Ala	
6566	115 120 125	
6567		
6568	CCC CCC GGG GCG CGT TCC TTG ACA CCA TGC ACC TGT GGC AGC TCA GAC	432
6569	Pro Pro Gly Ala Arg Ser Leu Thr Pro Cys Thr Cys Gly Ser Ser Asp	
6570	130 135 140	
6571		
6572	CTT TAC TTG GTC ACG AGA CAT GCT GAC GTC ATT CCG GTG CGC CGG CGG	480
6573	Leu Tyr Leu Val Thr Arg His Ala Asp Val Ile Pro Val Arg Arg Arg	
6574	145 150 155 160	
6575		
6576	GGC GAC AGT AGG GGG AGC CTG CTC TCC CCC AGG CCT GTC TCC TAC TTG	528
6577	Gly Asp Ser Arg Gly Ser Leu Leu Ser Pro Arg Pro Val Ser Tyr Leu	
6578	165 170 175	
6579		
6580	AAG GGC TCT GCT GGT GGT CCA CTG CTC TGC CCT TCG GGG CAC GCT GTG	576
6581	Lys Gly Ser Ala Gly Gly Pro Leu Leu Cys Pro Ser Gly His Ala Val	
6582	180 185 190	
6583		
6584	GGC ATC TTC CGG GCT GCC GTA TGC ACC CGG GGG GTT GCG AAG GCG GTG	624
6585	Gly Ile Phe Arg Ala Ala Val Cys Thr Arg Gly Val Ala Lys Ala Val	
6586	195 200 205	
6587		
6588	GAC TTT GTG CCC GTA GAG TCC ATG GAA ACT ACT ATG CGG TCT CCG GTC	672
6589	Asp Phe Val Pro Val Glu Ser Met Glu Thr Thr Met Arg Ser Pro Val	
6590	210 215 220	
6591		
6592	TTC ACG GAC AAC TCA TCC CCC CCG GCC GTA CCG CAG TCA TTT CAA GTG	720
6593	Phe Thr Asp Asn Ser Ser Pro Pro Ala Val Pro Gln Ser Phe Gln Val	
6594	225 230 235 240	
6595		
6596	GCC CAC CTA CAC GCT CCC ACT GGC AGC GGC AAG AGT ACT AAA GTG CCG	768
6597	Ala His Leu His Ala Pro Thr Gly Ser Gly Lys Ser Thr Lys Val Pro	
6598	245 250 255	
6599		
6600	GCT GCA TAT GCA GCC CAA GGG TAC AAG GTG CTC GTC CTC AAT CCG TCC	816
6601	Ala Ala Tyr Ala Ala Gln Gly Tyr Lys Val Leu Val Leu Asn Pro Ser	
6602	260 265 270	
6603		
6604	GTT GCC GCT ACC TTA GGG TTT GGG GCG TAT ATG TCT AAG GCA CAC GGT	864
6605	Val Ala Ala Thr Leu Gly Phe Gly Ala Tyr Met Ser Lys Ala His Gly	
6606	275 280 285	
6607		
6608	ATT GAC CCC AAC ATC AGA ACT GGG GTA AGG ACC ATT ACC ACA GGC GCC	912
6609	Ile Asp Pro Asn Ile Arg Thr Gly Val Arg Thr Ile Thr Thr Gly Ala	
6610	290 295 300	
6611		
6612	CCC GTC ACA TAC TCT ACC TAT GGC AAG TTT CTT GCC GAT GGT GGT TGC	960

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:07:08

INPUT SET: S30248.raw

6613	Pro Val Thr Tyr Ser Thr Tyr Gly Lys Phe Leu Ala Asp Gly Gly Cys			
6614	305	310	315	320
6615				
6616	TCT GGG GGC GCT TAT GAC ATC ATA ATA TGT GAT GAG TGC CAT TCA ACT			1008
6617	Ser Gly Gly Ala Tyr Asp Ile Ile Cys Asp Glu Cys His Ser Thr			
6618	325	330	335	
6619				
6620	GAC TCG ACT ACA ATC TTG GGC ATC GGC ACA GTC CTG GAC CAA GCG GAG			1056
6621	Asp Ser Thr Thr Ile Leu Gly Ile Gly Thr Val Leu Asp Gln Ala Glu			
6622	340	345	350	
6623				
6624	ACG GCT GGA GCG CGG CTT GTC GTG CTC GCC ACC GCT ACG CCT CCG GGA			1104
6625	Thr Ala Gly Ala Arg Leu Val Val Leu Ala Thr Ala Thr Pro Pro Gly			
6626	355	360	365	
6627				
6628	TCG GTC ACC GTG CCA CAC CCA AAC ATC GAG GAG GTG GCC CTG TCT AAT			1152
6629	Ser Val Thr Val Pro His Pro Asn Ile Glu Glu Val Ala Leu Ser Asn			
6630	370	375	380	
6631				
6632	ACT GGA GAG ATC CCC TTC TAT GGC AAA GCC ATC CCC ATT GAA GCC ATC			1200
6633	Thr Gly Glu Ile Pro Phe Tyr Gly Lys Ala Ile Pro Ile Glu Ala Ile			
6634	385	390	395	400
6635				
6636	AGG GGG GGA AGG CAT CTC ATT TTC TGT CAT TCC AAG AAG AAG TGC GAC			1248
6637	Arg Gly Arg His Leu Ile Phe Cys His Ser Lys Lys Lys Cys Asp			
6638	405	410	415	
6639				
6640	GAG CTC GCC GCA AAG CTG TCA GGC CTC GGA ATC AAC GCT GTG GCG TAT			1296
6641	Glu Leu Ala Ala Lys Leu Ser Gly Leu Gly Ile Asn Ala Val Ala Tyr			
6642	420	425	430	
6643				
6644	TAC CGG GGG CTC GAT GTG TCC GTC ATA CCA ACT ATC GGA GAC GTC GTT			1344
6645	Tyr Arg Gly Leu Asp Val Ser Val Ile Pro Thr Ile Gly Asp Val Val			
6646	435	440	445	
6647				
6648	GTC GTG GCA ACA GAC GCT CTG ATG ACG GGC TAT ACG GGC GAC TTT GAC			1392
6649	Val Val Ala Thr Asp Ala Leu Met Thr Gly Tyr Thr Gly Asp Phe Asp			
6650	450	455	460	
6651				
6652	TCA GTG ATC GAC TGT AAC ACA TGT GTC ACC CAG ACA GTC GAC TTC AGC			1440
6653	Ser Val Ile Asp Cys Asn Thr Cys Val Thr Gln Thr Val Asp Phe Ser			
6654	465	470	475	480
6655				
6656	TTG GAT CCC ACC TTC ACC ATT GAG ACG ACG ACC GTG CCT CAA GAC GCA			1488
6657	Leu Asp Pro Thr Phe Thr Ile Glu Thr Thr Thr Val Pro Gln Asp Ala			
6658	485	490	495	
6659				
6660	GTG TCG CGC TCG CAG CGG CGG GGT AGG ACT GGC AGG GGT AGG AGA GGC			1536
6661	Val Ser Arg Ser Gln Arg Arg Gly Arg Thr Gly Arg Gly Arg Arg Gly			
6662	500	505	510	
6663				
6664	ATC TAC AGG TTT GTG ACT CCG GGA GAA CGG CCC TCG GGC ATG TTC GAT			1584
6665	Ile Tyr Arg Phe Val Thr Pro Gly Glu Arg Pro Ser Gly Met Phe Asp			

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

 DATE: 12/09/98
 TIME: 16:07:09
INPUT SET: S30248.raw

6666	515	520	525	
6667				
6668	TCC TCG GTC CTG TGT GAG TGC TAT GAC GCG GGC TGT GCT TGG TAC GAG			1632
6669	Ser Ser Val Leu Cys Glu Cys Tyr Asp Ala Gly Cys Ala Trp Tyr Glu			
6670	530	535	540	
6671				
6672	CTC ACC CCC GCC GAG ACC TCG GTT AGG TTG CGG GCC TAC CTG AAC ACA			1680
6673	Leu Thr Pro Ala Glu Thr Ser Val Arg Leu Arg Ala Tyr Leu Asn Thr			
6674	545	550	555	560
6675				
6676	CCA GGG TTG CCC GTT TGC CAG GAC CAC CTG GAG TTC TGG GAG AGT GTC			1728
6677	Pro Gly Leu Pro Val Cys Gln Asp His Leu Glu Phe Trp Glu Ser Val			
6678	565	570	575	
6679				
6680	TTC ACA GGC CTC ACC CAT ATA GAT GCA CAC TTC TTG TCC CAG ACC AAG			1776
6681	Phe Thr Gly Leu Thr His Ile Asp Ala His Phe Leu Ser Gln Thr Lys			
6682	580	585	590	
6683				
6684	CAG GCA GGA GAC AAC TTC CCC TAC CTG GTA GCA TAC CAA GCC ACG GTG			1824
6685	Gln Ala Gly Asp Asn Phe Pro Tyr Leu Val Ala Tyr Gln Ala Thr Val			
6686	595	600	605	
6687				
6688	TGC GCC AGG GCT CAG GCC CCA CCT CCA TCA TGG GAT CAA ATG TGG AAG			1872
6689	Cys Ala Arg Ala Gln Ala Pro Pro Pro Ser Trp Asp Gln Met Trp Lys			
6690	610	615	620	
6691				
6692	TGT CTC ATA CGG CTG AAA CCT ACG CTG CAC GGG CCA ACA CCC TTG CTG			1920
6693	Cys Leu Ile Arg Leu Lys Pro Thr Leu His Gly Pro Thr Pro Leu Leu			
6694	625	630	635	640
6695				
6696	TAC AGG CTG GGA GCC GTC CAA AAT GAG GTC ACC CTC ACC CAC CCC ATA			1968
6697	Tyr Arg Leu Gly Ala Val Gln Asn Glu Val Thr Leu Thr His Pro Ile			
6698	645	650	655	
6699				
6700	ACC AAA TAC ATC ATG GCA TGC ATG TCG GCT GAC CTG GAG GTC GTC			2013
6701	Thr Lys Tyr Ile Met Ala Cys Met Ser Ala Asp Leu Glu Val Val			
6702	660	665	670	
6703				
6704	ACT			hard return
6705				2016(2) INFORM
6706	(i) SEQUENCE CHARACTERISTICS:			
6707	(A) LENGTH: 648 base pairs			
6708	(B) TYPE: nucleic acid			
6709	(C) STRANDEDNESS: single			
6710	(D) TOPOLOGY: linear			
6711				
6712	(ii) MOLECULE TYPE: cDNA			
6713				
6714				
6715	(ix) FEATURE:			
6716	(A) NAME/KEY: CDS			
6717	(B) LOCATION: 1..648			
6718				

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:07:10

INPUT SET: S30248.raw

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:07:10

INPUT SET: S30248.raw

6772	195	200	205	
6773				
6774	ATG GAA ACT ACT ATG CGG TCT TGA			648
6775	Met Glu Thr Thr Met Arg Ser *			
6776	210	215		(2) INFORMATION FOR SEQ ID NO:113:
6777				
6778	(i) SEQUENCE CHARACTERISTICS:			
6779	(A) LENGTH: 648 base pairs			
6780	(B) TYPE: nucleic acid			
6781	(C) STRANDEDNESS: single			
6782	(D) TOPOLOGY: linear			
6783				
6784	(ii) MOLECULE TYPE: cDNA			
6785				
6786				
6787	(ix) FEATURE:			
6788	(A) NAME/KEY: CDS			
6789	(B) LOCATION: 1..640			
6790				
6791				
--> 6792	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:113			
6793				
6794	ATG GGC AGC AGC CAT CAT CAT CAT CAT CAC AGC AGC GGC CTG GTG CCG			48
6795	Met Gly Ser Ser His His His His His Ser Ser Gly Leu Val Pro			
6796	1	5	10	15
6797				
6798	CGC GGC AGC CAT ATG GGT TCT GTT ATT GTT GGT AGA ATT ATT TTA			96
6799	Arg Gly Ser His Met Gly Ser Val Val Ile Val Gly Arg Ile Ile Leu			
6800	20	25	30	
6801				
6802	TCT CCT GCT GGT ATC ACG GCC TAC TCC CAA CAG ACG CGG GGC CTA CTT			144
6803	Ser Pro Ala Gly Ile Thr Ala Tyr Ser Gln Gln Thr Arg Gly Leu Leu			
6804	35	40	45	
6805				
6806	GGT TGC AAG ATC ACT AGC CTT ACA GGC CGG GAC AAG AAC CAG GTC GAG			192
6807	Gly Cys Lys Ile Thr Ser Leu Thr Gly Arg Asp Lys Asn Gln Val Glu			
6808	50	55	60	
6809				
6810	GGA GAG GTT CAG GTG GTT TCC ACC GCA ACA CAA TCC TTC CTG GCG ACC			240
6811	Gly Glu Val Gln Val Val Ser Thr Ala Thr Gln Ser Phe Leu Ala Thr			
6812	65	70	75	80
6813				
6814	TGC GTC AAC GGC GTG TGT TGG ACC GTT TAC CAT GGT GCT GGC TCA AAG			288
6815	Cys Val Asn Gly Val Cys Trp Thr Val Tyr His Gly Ala Gly Ser Lys			
6816	85	90	95	
6817				
6818	ACC TTA GCC GGC CCA AAG GGG CCA ATC ACC CAG ATG TAC ACT AAT GTG			336
6819	Thr Leu Ala Gly Pro Lys Gly Pro Ile Thr Gln Met Tyr Thr Asn Val			
6820	100	105	110	
6821				
6822	GAC CAG GAC CTC GTC GGC TGG CAG GCG CCC CCC GGG GCG CGT TCC TTG			384
6823	Asp Gln Asp Leu Val Gly Trp Gln Ala Pro Pro Gly Ala Arg Ser Leu			
6824	115	120	125	

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:07:11

INPUT SET: S30248.raw

6825				
6826	ACA CCA TGC ACC TGT GGC AGC TCA GAC CTT TAC TTG GTC ACG AGA CAT			432
6827	Thr Pro Cys Thr Cys Gly Ser Ser Asp Leu Tyr Leu Val Thr Arg His			
6828	130	135	140	
6829				
6830	GCT GAC GTC ATT CCG GTG CGC CGG CGG GGC GAC AGT AGG GGG AGC CTG			480
6831	Ala Asp Val Ile Pro Val Arg Arg Gly Asp Ser Arg Gly Ser Leu			
6832	145	150	155	160
6833				
6834	CTC TCC CCC AGG CCT GTC TCC TAC TTG AAG GGC TCT TCG GGT GGT CCA			528
6835	Leu Ser Pro Arg Pro Val Ser Tyr Leu Lys Gly Ser Ser Gly Gly Pro			
6836	165	170	175	
6837				
6838	CTG CTC TGC CCT TCG GGG CAC GCT GTG GGC ATC TTC CGG GCT GCC GTA			576
6839	Leu Leu Cys Pro Ser Gly His Ala Val Gly Ile Phe Arg Ala Ala Val			
6840	180	185	190	
6841				
6842	TGC ACC CGG GGG GTT GCG AAG GCG GTG GAC TTT GTG CCC GTA GAG TCC			624
6843	Cys Thr Arg Gly Val Ala Lys Ala Val Asp Phe Val Pro Val Glu Ser			
6844	195	200	205	
6845				
6846	ATG GAA ACT ACT ATG C GGTCTTGAA			648
6847	Met Glu Thr Thr Met			
6848	210			
6849				
6850	(i) SEQUENCE CHARACTERISTICS:			
6851	(A) LENGTH: 498 base pairs			
6852	(B) TYPE: nucleic acid			
6853	(C) STRANDEDNESS: single			
6854	(D) TOPOLOGY: linear			
6855				
6856	(ii) MOLECULE TYPE: cDNA			
6857				
6858				
6859	(ix) FEATURE:			
6860	(A) NAME/KEY: CDS			
6861	(B) LOCATION: 1..498			
6862				
6863				
--> 6864	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:114:			
6865				
6866	ATG ATC ACT AGC CTT ACA GGC CGG GAC AAG AAC CAG GTC GAG GGA GAG			48
6867	Met Ile Thr Ser Leu Thr Gly Arg Asp Lys Asn Gln Val Glu Gly Glu			
6868	1	5	10	15
6869				
6870	GTT CAG GTG GTT TCC ACC GCA ACA CAA TCC TTC CTG GCG ACC TGC GTC			96
6871	Val Gln Val Val Ser Thr Ala Thr Gln Ser Phe Leu Ala Thr Cys Val			
6872	20	25	30	
6873				
6874	AAC GGC GTG TGT TGG ACC GTT TAC CAT GGT GCT GGC TCA AAG ACC TTA			144
6875	Asn Gly Val Cys Trp Thr Val Tyr His Gly Ala Gly Ser Lys Thr Leu			
6876	35	40	45	
6877				

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:07:12

INPUT SET: S30248.raw

6878	GCC GGC CCA AAG GGG CCA ATC ACC CAG ATG TAC ACT AAT GTG GAC CAG	192
6879	Ala Gly Pro Lys Gly Pro Ile Thr Gln Met Tyr Thr Asn Val Asp Gln	
6880	50 55 60	
6881		
6882	GAC CTC GTC GGC TGG CAG GCG CCC CCC GGG GCG CGT TCC TTG ACA CCA	240
6883	Asp Leu Val Gly Trp Gln Ala Pro Pro Gly Ala Arg Ser Leu Thr Pro	
6884	65 70 75 80	
6885		
6886	TGC ACC TGT GGC AGC TCA GAC CTT TAC TTG GTC ACG AGA CAT GCT GAC	288
6887	Cys Thr Cys Gly Ser Ser Asp Leu Tyr Leu Val Thr Arg His Ala Asp	
6888	85 90 95	
6889		
6890	GTC ATT CCG GTG CGC CGG CGG GGC GAC AGT AGG GGG AGC CTG CTC TCC	336
6891	Val Ile Pro Val Arg Arg Arg Gly Asp Ser Arg Gly Ser Leu Leu Ser	
6892	100 105 110	
6893		
6894	CCC AGG CCT GTC TCC TAC TTG AAG GGC TCT TCG GGT GGT CCA CTG CTC	384
6895	Pro Arg Pro Val Ser Tyr Leu Lys Gly Ser Ser Gly Gly Pro Leu Leu	
6896	115 120 125	
6897		
6898	TGC CCT TCG GGG CAC GCT GTG GGC ATC TTC CGG GCT GCC GTA TGC ACC	432
6899	Cys Pro Ser Gly His Ala Val Gly Ile Phe Arg Ala Ala Val Cys Thr	
6900	130 135 140	
6901		
6902	CGG GGG GTT GCG AAG GCG GTG GAC TTT GTG CCC GTA GAG TCC ATG GAA	480
6903	Arg Gly Val Ala Lys Ala Val Asp Phe Val Pro Val Glu Ser Met Glu	
6904	145 150 155 160	
6905		
6906	ACT ACT ATG CGG TCT TGA	498
6907	Thr Thr Met Arg Ser *	
6908	165 (2) INFORMATION FOR SEQ ID NO:115:	
6909		
6910	(i) SEQUENCE CHARACTERISTICS:	
6911	(A) LENGTH: 648 base pairs	
6912	(B) TYPE: nucleic acid	
6913	(C) STRANDEDNESS: single	
6914	(D) TOPOLOGY: linear	
6915		
6916	(ii) MOLECULE TYPE: cDNA	
6917		
6918		
6919	(ix) FEATURE:	
6920	(A) NAME/KEY: CDS	
6921	(B) LOCATION: 1..648	
6922		
6923		
--> 6924	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:115:	
6925		
6926	ATG GGC AGC AGC CAT CAT CAT CAT CAC AGC AGC GGC CTG GTG CCG	48
6927	Met Gly Ser Ser His His His His His His Ser Ser Gly Leu Val Pro	
6928	1 5 10 15	
6929		
6930	CGC GGC AGC CAT ATG GGT TCT GTT ATT GTT GGT AGA ATT ATT TTA	96

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723

DATE: 12/09/98
 TIME: 16:07:12

INPUT SET: S30248.raw

6931	Arg Gly Ser His Met Gly Ser Val Val Ile Val Gly Arg Ile Ile Leu			
6932	20	25	30	
6933				
6934	TCT GGT TCT ATC ACG GCC TAC TCC CAA CAG ACG CGG GGC CTA CTT		144	
6935	Ser Gly Gly Ser Ile Thr Ala Tyr Ser Gln Gln Thr Arg Gly Leu Leu			
6936	35	40	45	
6937				
6938	GGT TGC AAG ATC ACT AGC CTT ACA GGC CGG GAC AAG AAC CAG GTC GAG		192	
6939	Gly Cys Lys Ile Thr Ser Leu Thr Gly Arg Asp Lys Asn Gln Val Glu			
6940	50	55	60	
6941				
6942	GGA GAG GTT CAG GTG GTT TCC ACC GCA ACA CAA TCC TTC CTG GCG ACC		240	
6943	Gly Glu Val Gln Val Val Ser Thr Ala Thr Gln Ser Phe Leu Ala Thr			
6944	65	70	75	80
6945				
6946	TGC GTC AAC GGC GTG TGT TGG ACC GTT TAC CAT GGT GCT GGC TCA AAG		288	
6947	Cys Val Asn Gly Val Cys Trp Thr Val Tyr His Gly Ala Gly Ser Lys			
6948	85	90	95	
6949				
6950	ACC TTA GCC GGC CCA AAG GGG CCA ATC ACC CAG ATG TAC ACT AAT GTG		336	
6951	Thr Leu Ala Gly Pro Lys Gly Pro Ile Thr Gln Met Tyr Thr Asn Val			
6952	100	105	110	
6953				
6954	GAC CAG GAC CTC GTC GGC TGG CAG GCG CCC CCC GGG GCG CGT TCC TTG		384	
6955	Asp Gln Asp Leu Val Gly Trp Gln Ala Pro Pro Gly Ala Arg Ser Leu			
6956	115	120	125	
6957				
6958	ACA CCA TGC ACC TGT GGC AGC TCA GAC CTT TAC TTG GTC ACG AGA CAT		432	
6959	Thr Pro Cys Thr Cys Gly Ser Ser Asp Leu Tyr Leu Val Thr Arg His			
6960	130	135	140	
6961				
6962	GCT GAC GTC ATT CCG GTG CGC CGG CGG GGC GAC AGT AGG GGG AGC CTG		480	
6963	Ala Asp Val Ile Pro Val Arg Arg Gly Asp Ser Arg Gly Ser Leu			
6964	145	150	155	160
6965				
6966	CTC TCC CCC AGG CCT GTC TCC TAC TTG AAG GGC TCT TCG GGT GGT CCA		528	
6967	Leu Ser Pro Arg Pro Val Ser Tyr Leu Lys Gly Ser Ser Gly Gly Pro			
6968	165	170	175	
6969				
6970	CTG CTC TGC CCT TCG GGG CAC GCT GTG GGC ATC TTC CGG GCT GCC GTA		576	
6971	Leu Leu Cys Pro Ser Gly His Ala Val Gly Ile Phe Arg Ala Ala Val			
6972	180	185	190	
6973				
6974	TGC ACC CGG GGG GTT GCG AAG GCG GTG GAC TTT GTG CCC GTA GAG TCC		624	
6975	Cys Thr Arg Gly Val Ala Lys Ala Val Asp Phe Val Pro Val Glu Ser			
6976	195	200	205	
6977				
6978	ATG GAA ACT ACT ATG CGG TCT TGA		648	
6979	Met Glu Thr Thr Met Arg Ser *			
6980	210	215	(2) INFORMATION FOR SEQ ID NO:116:	
6981				
6982	(i) SEQUENCE CHARACTERISTICS:			
6983	(A) LENGTH: 2007 base pairs			

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:07:13

INPUT SET: S30248.raw

6984	(B) TYPE: nucleic acid																		
6985				(C) STRANDEDNESS: single															
6986				(D) TOPOLOGY: linear															
6987																			
6988	(ii) MOLECULE TYPE: cDNA																		
6989																			
6990																			
6991																			
6992	(ix) FEATURE:																		
6993				(A) NAME/KEY: CDS															
6994				(B) LOCATION: 1..2004															
6995																			
6996																			
--> 6997	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:116:																		
6998																			
6999	ATG	CAT	ATG	CAT	CAT	CAT	CAC	CAT	CTG	GTG	CCG	CGC	GGC	AGC	GCG	48			
7000	Met		Met		His		His		His		His		Leu	Val	Pro	Arg	Gly	Ser	Ala
7001	1		5						10							15			
7002																			
7003	CCC	ATC	ACG	GCC	TAC	TCC	CAA	CAG	ACG	CGG	GGC	CTA	CTT	GGT	TGC	AAG	96		
7004	Pro	Ile	Thr	Ala	Tyr	Ser	Gln	Gln	Thr	Arg	Gly	Leu	Leu	Gly	Cys	Lys			
7005							20			25				30					
7006																			
7007	ATC	ACT	AGC	CTT	ACA	GGC	CGG	GAC	AAG	AAC	CAG	GTC	GAG	GGG	GAG	GTT	144		
7008	Ile	Thr	Ser	Leu	Thr	Gly	Arg	Asp	Lys	Asn	Gln	Val	Glu	Gly	Glu	Val			
7009							35			40			45						
7010																			
7011	CAG	GTG	GTT	TCC	ACC	GCA	ACA	CAA	TCC	TTC	CTG	GCG	ACC	TGC	GTC	AAC	192		
7012	Gln	Val	Val	Ser	Thr	Ala	Thr	Gln	Ser	Phe	Leu	Ala	Thr	Cys	Val	Asn			
7013							50			55			60						
7014																			
7015	GGC	GTG	TGT	TGG	ACC	GTT	TAC	CAT	GGT	GCT	GGC	TCA	AAG	ACC	TTA	GCC	240		
7016	Gly	Val	Cys	Trp	Thr	Val	Tyr	His	Gly	Ala	Gly	Ser	Lys	Thr	Leu	Ala			
7017							65			70			75			80			
7018																			
7019	GGC	CCA	AAG	GGG	CCA	ATC	ACC	CAG	ATG	TAC	ACT	AAT	GTG	GAC	CAG	GAC	288		
7020	Gly	Pro	Lys	Gly	Pro	Ile	Thr	Gln	Met	Tyr	Thr	Asn	Val	Asp	Gln	Asp			
7021							85			90			95						
7022																			
7023	CTC	GTC	GGC	TGG	CAG	GCG	CCC	CCC	GGG	GCG	CGT	TCC	TTG	ACA	CCA	TGC	336		
7024	Leu	Val	Gly	Trp	Gln	Ala	Pro	Pro	Gly	Ala	Arg	Ser	Leu	Thr	Pro	Cys			
7025							100			105			110						
7026																			
7027	ACC	TGT	GGC	AGC	TCA	GAC	CTT	TAC	TTG	GTC	ACG	AGA	CAT	GCT	GAC	GTC	384		
7028	Thr	Cys	Gly	Ser	Ser	Asp	Leu	Tyr	Leu	Val	Thr	Arg	His	Ala	Asp	Val			
7029							115			120			125						
7030																			
7031	ATT	CCG	GTG	CGC	CGG	GGG	GGC	GAC	AGT	AGG	GGG	AGC	CTG	CTC	TCC	CCC	432		
7032	Ile	Pro	Val	Arg	Arg	Arg	Gly	Asp	Ser	Arg	Gly	Ser	Leu	Leu	Ser	Pro			
7033							130			135			140						
7034																			
7035	AGG	CCT	GTC	TCC	TAC	TTG	AAG	GGC	TCT	TCG	GGT	GGT	CCA	CTG	CTC	TGC	480		
7036	Arg	Pro	Val	Ser	Tyr	Leu	Lys	Gly	Ser	Ser	Gly	Gly	Pro	Leu	Leu	Cys			

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:07:14

INPUT SET: S30248.raw

7037	145	150	155	160
7038				
7039	CCT TCG GGG CAC GCT GTG GGC ATC TTC CGG GCT GCC GTA TGC ACC CGG			528
7040	Pro Ser Gly His Ala Val Gly Ile Phe Arg Ala Ala Val Cys Thr Arg			
7041	165	170	175	
7042				
7043	GGG GTT GCG AAG GCG GTG GAC TTT GTG CCC GTA GAG TCC ATG GAA ACT			576
7044	Gly Val Ala Lys Ala Val Asp Phe Val Pro Val Glu Ser Met Glu Thr			
7045	180	185	190	
7046				
7047	ACT ATG CGG TCT CCG GTC TTC ACG GAC AAC TCA TCC CCC CCG GCC GTA			624
7048	Thr Met Arg Ser Pro Val Phe Thr Asp Asn Ser Ser Pro Pro Ala Val			
7049	195	200	205	
7050				
7051	CCG CAG TCA TTT CAA GTG GCC CAC CTA CAC GCT CCC ACT GGC AGC GGC			672
7052	Pro Gln Ser Phe Gln Val Ala His Leu His Ala Pro Thr Gly Ser Gly			
7053	210	215	220	
7054				
7055	AAG AGT ACT AAA GTG CCG GCT GCA TAT GCA GCC CAA GGG TAC AAG GTG			720
7056	Lys Ser Thr Lys Val Pro Ala Ala Tyr Ala Ala Gln Gly Tyr Lys Val			
7057	225	230	235	240
7058				
7059	CTC GTC CTC AAT CCG TCC GTT GCC GCT ACC TTA GGG TTT GGG GCG TAT			768
7060	Leu Val Leu Asn Pro Ser Val Ala Ala Thr Leu Gly Phe Gly Ala Tyr			
7061	245	250	255	
7062				
7063	ATG TCT AAG GCA CAC GGT ATT GAC CCC AAC ATC AGA ACT GGG GTA AGG			816
7064	Met Ser Lys Ala His Gly Ile Asp Pro Asn Ile Arg Thr Gly Val Arg			
7065	260	265	270	
7066				
7067	ACC ATT ACC ACA GGC GCC CCC GTC ACA TAC TCT ACC TAT GGC AAG TTT			864
7068	Thr Ile Thr Thr Gly Ala Pro Val Thr Tyr Ser Thr Tyr Gly Lys Phe			
7069	275	280	285	
7070				
7071	CTT GCC GAT GGT GGT TGC TCT GGG GGC GCT TAT GAC ATC ATA ATA TGT			912
7072	Leu Ala Asp Gly Gly Cys Ser Gly Gly Ala Tyr Asp Ile Ile Ile Cys			
7073	290	295	300	
7074				
7075	GAT GAG TGC CAT TCA ACT GAC TCG ACT ACA ATC TTG GGC ATC GGC ACA			960
7076	Asp Glu Cys His Ser Thr Asp Ser Thr Thr Ile Leu Gly Ile Gly Thr			
7077	305	310	315	320
7078				
7079	GTC CTG GAC CAA GCG GAG ACG GCT GGA GCG CGG CTT GTC GTG CTC GCC			1008
7080	Val Leu Asp Gln Ala Glu Thr Ala Gly Ala Arg Leu Val Val Leu Ala			
7081	325	330	335	
7082				
7083	ACC GCT ACG CCT CCG GGA TCG GTC ACC GTG CCA CAC CCA AAC ATC GAG			1056
7084	Thr Ala Thr Pro Pro Gly Ser Val Thr Val Pro His Pro Asn Ile Glu			
7085	340	345	350	
7086				
7087	GAG GTG GCC CTG TCT AAT ACT GGA GAG ATC CCC TTC TAT GGC AAA GCC			1104
7088	Glu Val Ala Leu Ser Asn Thr Gly Glu Ile Pro Phe Tyr Gly Lys Ala			
7089	355	360	365	

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:07:14

INPUT SET: S30248.raw

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723

DATE: 12/09/98
 TIME: 16:07:15

INPUT SET: S30248.raw

7143	GCA TAC CAA GCC ACG GTG TGC GCC AGG GCT CAG GCC CCA CCT CCA TCA	1776
7144	Ala Tyr Gln Ala Thr Val Cys Ala Arg Ala Gln Ala Pro Pro Pro Ser	
7145	580	585
7146		590
7147	TGG GAT CAA ATG TGG AAG TGT CTC ATA CGG CTG AAA CCT ACG CTG CAC	1824
7148	Trp Asp Gln Met Trp Lys Cys Leu Ile Arg Leu Lys Pro Thr Leu His	
7149	595	600
7150		605
7151	GGG CCA ACA CCC TTG CTG TAC AGG CTG GGA GCC GTC CAA AAT GAG GTC	1872
7152	Gly Pro Thr Pro Leu Leu Tyr Arg Leu Gly Ala Val Gln Asn Glu Val	
7153	610	615
7154		620
7155	ACC CTC ACC CAC CCC ATA ACC AAA TAC ATC ATG GCA TGC ATG TCG GCC	1920
7156	Thr Leu Thr His Pro Ile Thr Lys Tyr Ile Met Ala Cys Met Ser Ala	
7157	625	630
7158		635
7159	640	
7160	GAC CTG GAG GTC GTT ACG TAG GAA TTC GAG CTC CGT CGA CAA GCT TGC	1968
7161	Asp Leu Glu Val Val Thr * Glu Phe Glu Leu Arg Arg Gln Ala Cys	
7162	645	650
7163	655	
7164	GGC CGC ACT CGA GCA CCA CCA CCA CCA CCA CTG AGA TCC	2007
7165	Gly Arg Thr Arg Ala Pro Pro Pro Pro Leu Arg	
7166	660	665
7167	(2) INFORMATION FOR SEQ ID NO:11	
7168	(i) SEQUENCE CHARACTERISTICS:	
7169	(A) LENGTH: 2007 base pairs	
7170	(B) TYPE: nucleic acid	
7171	(C) STRANDEDNESS: single	
7172	(D) TOPOLOGY: linear	
7173	(ii) MOLECULE TYPE: cDNA	
7174		
7175		
7176		
7177		
7178	(ix) FEATURE:	
7179	(A) NAME/KEY: CDS	
7180	(B) LOCATION: 1..2004	
7181		
7182		
---> 7183	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:117:	
7184		
7185	ATG CAT ATG CAT CAT CAC CAT CAT CTG GTG CCG CGC GGC AGC GCG	48
7186	Met His Met His His His His His Leu Val Pro Arg Gly Ser Ala	
7187	1	5
7188		10
7189		15
7190	CCC ATC ACG GCC TAC TCC CAA CAG ACG CGG GGC CTA CTT GGT TGC ATC	96
7191	Pro Ile Thr Ala Tyr Ser Gln Gln Thr Arg Gly Leu Leu Gly Cys Ile	
7192	20	25
7193		30
7194	AAG ACT AGC CTT ACA GGC CGG GAC AAG AAC CAG GTC GAG GGA GAG GTT	144
7195	Lys Thr Ser Leu Thr Gly Arg Asp Lys Asn Gln Val Glu Gly Glu Val	
	35	40
		45

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

 DATE: 12/09/98
 TIME: 16:07:16
INPUT SET: S30248.raw

7196					
7197	CAG GTG GTT TCC ACC GCA ACA CAA TCC TTC CTG GCG ACC TGC GTC AAC				192
7198	Gln Val Val Ser Thr Ala Thr Gln Ser Phe Leu Ala Thr Cys Val Asn				
7199	50	55	60		
7200					
7201	GGC GTG TGT TGG ACC GTT TAC CAT GGT GCT GGC TCA AAG ACC TTA GCC				240
7202	Gly Val Cys Trp Thr Val Tyr His Gly Ala Gly Ser Lys Thr Leu Ala				
7203	65	70	75	80	
7204					
7205	GGC CCA AAG GGG CCA ATC ACC CAG ATG TAC ACT AAT GTG GAC CAG GAC				288
7206	Gly Pro Lys Gly Pro Ile Thr Gln Met Tyr Thr Asn Val Asp Gln Asp				
7207	85	90	95		
7208					
7209	CTC GTC GGC TGG CAG GCG CCC CCC GGG GCG CGT TCC TTG ACA CCA TGC				336
7210	Leu Val Gly Trp Gln Ala Pro Pro Gly Ala Arg Ser Leu Thr Pro Cys				
7211	100	105	110		
7212					
7213	ACC TGT GGC AGC TCA GAC CTT TAC TTG GTC ACG AGA CAT GCT GAC GTC				384
7214	Thr Cys Gly Ser Ser Asp Leu Tyr Leu Val Thr Arg His Ala Asp Val				
7215	115	120	125		
7216					
7217	ATT CCG GTG CGC CGG CGG GGC GAC AGT AGG GGG AGC CTG CTC TCC CCC				432
7218	Ile Pro Val Arg Arg Arg Gly Asp Ser Arg Gly Ser Leu Leu Ser Pro				
7219	130	135	140		
7220					
7221	AGG CCT GTC TCC TAC TTG AAG GGC TCT TCG GGT GGT CCA CTG CTC TGC				480
7222	Arg Pro Val Ser Tyr Leu Lys Gly Ser Ser Gly Gly Pro Leu Leu Cys				
7223	145	150	155	160	
7224					
7225	CCT TCG GGG CAC GCT GTG GCC ATC TTC CGG GCT GCC GTA TGC ACC CGG				528
7226	Pro Ser Gly His Ala Val Gly Ile Phe Arg Ala Ala Val Cys Thr Arg				
7227	165	170	175		
7228					
7229	GGG GTT GCG AAG GCG GTG GAC TTT GTG CCC GTA GAG TCC ATG GAA ACT				576
7230	Gly Val Ala Lys Ala Val Asp Phe Val Pro Val Glu Ser Met Glu Thr				
7231	180	185	190		
7232					
7233	ACT ATG CGG TCT CCG GTC TTC ACG GAC AAC TCA TCC CCC CCG GCC GTA				624
7234	Thr Met Arg Ser Pro Val Phe Thr Asp Asn Ser Ser Pro Pro Ala Val				
7235	195	200	205		
7236					
7237	CCG CAG TCA TTT CAA GTG GCC CAC CTA CAC GCT CCC ACT GGC AGC GGC				672
7238	Pro Gln Ser Phe Gln Val Ala His Leu His Ala Pro Thr Gly Ser Gly				
7239	210	215	220		
7240					
7241	AAG AGT ACT AAA GTG CCG GCT GCA TAT GCA GCC CAA GGG TAC AAG GTG				720
7242	Lys Ser Thr Lys Val Pro Ala Ala Tyr Ala Ala Gln Gly Tyr Lys Val				
7243	225	230	235	240	
7244					
7245	CTC GTC CTC AAT CCG TCC GTT GCC GCT ACC TTA GGG TTT GGG GCG TAT				768
7246	Leu Val Leu Asn Pro Ser Val Ala Ala Thr Leu Gly Phe Gly Ala Tyr				
7247	245	250	255		
7248					

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723

DATE: 12/09/98
 TIME: 16:07:17

INPUT SET: S30248.raw

7249	ATG TCT AAG GCA CAC GGT ATT GAC CCC AAC ATC AGA ACT GGG GTA AGG	816
7250	Met Ser Lys Ala His Gly Ile Asp Pro Asn Ile Arg Thr Gly Val Arg	
7251	260	265
7252		270
7253	ACC ATT ACC ACA GGC GCC CCC GTC ACA TAC TCT ACC TAT GGC AAG TTT	864
7254	Thr Ile Thr Thr Gly Ala Pro Val Thr Tyr Ser Thr Tyr Gly Lys Phe	
7255	275	280
7256		285
7257	CTT GCC GAT GGT GGT TGC TCT GGG GGC GCT TAT GAC ATC ATA ATA TGT	912
7258	Leu Ala Asp Gly Gly Cys Ser Gly Gly Ala Tyr Asp Ile Ile Ile Cys	
7259	290	295
7260		300
7261	GAT GAG TGC CAT TCA ACT GAC TCG ACT ACA ATC TTG GGC ATC GGC ACA	960
7262	Asp Glu Cys His Ser Thr Asp Ser Thr Thr Ile Leu Gly Ile Gly Thr	
7263	305	310
7264		315
7265	GTC CTG GAC CAA GCG GAG ACG GCT GGA GCG CGG CTT GTC GTG CTC GCC	1008
7266	Val Leu Asp Gln Ala Glu Thr Ala Gly Ala Arg Leu Val Val Leu Ala	
7267	325	330
7268		335
7269	ACC GCT ACG CCT CCG GGA TCG GTC ACC GTG CCA CAC CCA AAC ATC GAG	1056
7270	Thr Ala Thr Pro Pro Gly Ser Val Thr Val Pro His Pro Asn Ile Glu	
7271	340	345
7272		350
7273	GAG GTG GCC CTG TCT AAT ACT GGA GAG ATC CCC TTC TAT GGC AAA GCC	1104
7274	Glu Val Ala Leu Ser Asn Thr Gly Glu Ile Pro Phe Tyr Gly Lys Ala	
7275	355	360
7276		365
7277	ATC CCC ATT GAA GCC ATC AGG GGG GGA AGG CAT CTC ATT TTC TGT CAT	1152
7278	Ile Pro Ile Glu Ala Ile Arg Gly Gly Arg His Leu Ile Phe Cys His	
7279	370	375
7280		380
7281	TCC AAG AAG AAG TGC GAC GAG CTC GCC GCA AAG CTG TCA GGC CTC GGA	1200
7282	Ser Lys Lys Cys Asp Glu Leu Ala Ala Lys Leu Ser Gly Leu Gly	
7283	385	390
7284		395
7285	400	
7286	ATC AAC GCT GTG GCG TAT TAC CGG GGG CTC GAT GTG TCC GTC ATA CCA	1248
7287	Ile Asn Ala Val Ala Tyr Tyr Arg Gly Leu Asp Val Ser Val Ile Pro	
7288	405	410
7289		415
7290	ACT ATC GGA GAC GTC GTT GTC GTG GCA ACA GAC GCT CTG ATG ACG GGC	1296
7291	Thr Ile Gly Asp Val Val Val Ala Thr Asp Ala Leu Met Thr Gly	
7292	420	425
7293		430
7294	TAT ACG GGC GAC TTT GAC TCA GTG ATC GAC TGT AAC ACA TGT GTC ACC	1344
7295	Tyr Thr Gly Asp Phe Asp Ser Val Ile Asp Cys Asn Thr Cys Val Thr	
7296	435	440
7297		445
7298	CAG ACA GTC GAC TTC AGC TTG GAT CCC ACC TTC ACC ATT GAG ACG ACG	1392
7299	Gln Thr Val Asp Phe Ser Leu Asp Pro Thr Phe Thr Ile Glu Thr Thr	
7300	450	455
7301		460
	ACC GTG CCT CAA GAC GCA GTG TCG CGC TCG CAG CGG CGG GGT AGG ACT	1440

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:07:17

INPUT SET: S30248.raw

7302	Thr Val Pro Gln Asp Ala Val Ser Arg Ser Gln Arg Arg Gly Arg Thr			
7303	465	470	475	480
7304				
7305	GGC AGG GGT AGG AGA GGC ATC TAC AGG TTT GTG ACT CCG GGA GAA CGG			1488
7306	Gly Arg Gly Arg Arg Gly Ile Tyr Arg Phe Val Thr Pro Gly Glu Arg			
7307	485	490	495	
7308				
7309	CCC TCG GGC ATG TTC GAT TCC TCG GTC CTG TGT GAG TGC TAT GAC GCG			1536
7310	Pro Ser Gly Met Phe Asp Ser Ser Val Leu Cys Glu Cys Tyr Asp Ala			
7311	500	505	510	
7312				
7313	GGC TGT GCT TGG TAC GAG CTC ACC CCC GCC GAG ACC TCG GTT AGG TTG			1584
7314	Gly Cys Ala Trp Tyr Glu Leu Thr Pro Ala Glu Thr Ser Val Arg Leu			
7315	515	520	525	
7316				
7317	CGG GCC TAC CTG AAC ACA CCA GGG TTG CCC GTT TGC CAG GAC CAC CTG			1632
7318	Arg Ala Tyr Leu Asn Thr Pro Gly Leu Pro Val Cys Gln Asp His Leu			
7319	530	535	540	
7320				
7321	GAG TTC TGG GAG AGT GTC TTC ACA GGC CTC ACC CAT ATA GAT GCA CAC			1680
7322	Glu Phe Trp Glu Ser Val Phe Thr Gly Leu Thr His Ile Asp Ala His			
7323	545	550	555	560
7324				
7325	TTC TTG TCC CAG ACC AAG CAG GCA GGA GAC AAC TTC CCC TAC CTG GTA			1728
7326	Phe Leu Ser Gln Thr Lys Gln Ala Gly Asp Asn Phe Pro Tyr Leu Val			
7327	565	570	575	
7328				
7329	GCA TAC CAA GCC ACG GTG TGC GCC AGG GCT CAG GCC CCA CCT CCA TCA			1776
7330	Ala Tyr Gln Ala Thr Val Cys Ala Arg Ala Gln Ala Pro Pro Pro Ser			
7331	580	585	590	
7332				
7333	TGG GAT CAA ATG TGG AAG TGT CTC ATA CGG CTG AAA CCT ACG CTG CAC			1824
7334	Trp Asp Gln Met Trp Lys Cys Leu Ile Arg Leu Lys Pro Thr Leu His			
7335	595	600	605	
7336				
7337	GGG CCA ACA CCC TTG CTG TAC AGG CTG GGA GCC GTC CAA AAT GAG GTC			1872
7338	Gly Pro Thr Pro Leu Leu Tyr Arg Leu Gly Ala Val Gln Asn Glu Val			
7339	610	615	620	
7340				
7341	ACC CTC ACC CAC CCC ATA ACC AAA TAC ATC ATG GCA TGC ATG TCG GCC			1920
7342	Thr Leu Thr His Pro Ile Thr Lys Tyr Ile Met Ala Cys Met Ser Ala			
7343	625	630	635	640
7344				
7345	GAC CTG GAG GTC GTT ACG TAG GAA TTC GAG CTC CGT CGA CAA GCT TGC			1968
7346	Asp Leu Glu Val Val Thr * Glu Phe Glu Leu Arg Arg Gln Ala Cys			
7347	645	650	655	
7348				
7349	GGC CGC ACT CGA GCA CCA CCA CCA CCA CCA CTG AGA TCC			2007
7350	Gly Arg Thr Arg Ala Pro Pro Pro Pro Pro Leu Arg			
7351	660	665		

--> 7352 (2) INFORMATION FOR SEQ ID NO:118:
7353

OK

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

 DATE: 12/09/98
 TIME: 16:07:20
INPUT SET: S30248.raw

7513	565	570	575	
7514				
7515	GCA TAC CAA GCC ACG GTG TGC GCC AGG GCT CAG GCC CCA CCT CCA TCA			1776
7516	Ala Tyr Gln Ala Thr Val Cys Ala Arg Ala Gln Ala Pro Pro Pro Ser			
7517	580	585	590	
7518				
7519	TGG GAT CAA ATG TGG AAG TGT CTC ATA CGG CTG AAA CCT ACG CTG CAC			1824
7520	Trp Asp Gln Met Trp Lys Cys Leu Ile Arg Leu Lys Pro Thr Leu His			
7521	595	600	605	
7522				
7523	GGG CCA ACA CCC TTG CTG TAC AGG CTG GGA GCC GTC CAA AAT GAG GTC			1872
7524	Gly Pro Thr Pro Leu Leu Tyr Arg Leu Gly Ala Val Gln Asn Glu Val			
7525	610	615	620	
7526				
7527	ACC CTC ACC CAC CCC ATA ACC AAA TAC ATC ATG GCA TGC ATG TCG GCC			1920
7528	Thr Leu Thr His Pro Ile Thr Lys Tyr Ile Met Ala Cys Met Ser Ala			
7529	625	630	635	640
7530				
7531	GAC CTG GAG GTC GTT ACG TAG GAA TTC GAG CTC CGT CGA CAA GCT TGC			1968
7532	Asp Leu Glu Val Val Thr * Glu Phe Glu Leu Arg Arg Gln Ala Cys			
7533	645	650	655	
7534				
7535	GGC CGC ACT CGA GCA CCA CCA CCA CCA CCA CTG AGA TCC			2007
7536	Gly Arg Thr Arg Ala Pro Pro Pro Pro Leu Arg			
7537	660	665		
7538				
7539	(i) SEQUENCE CHARACTERISTICS:			
7540	(A) LENGTH: 2007 base pairs			
7541	(B) TYPE: nucleic acid			
7542	(C) STRANDEDNESS: single			
7543	(D) TOPOLOGY: linear			
7544				
7545	(ii) MOLECULE TYPE: cDNA			
7546				
7547				
7548				
7549	(ix) FEATURE:			
7550	(A) NAME/KEY: CDS			
7551	(B) LOCATION: 1..2004			
7552				
7553				
--> 7554	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:119:			
7555				
7556	ATG CAT ATG CAT CAT CAC CAT CAT CTG GTG CCG CGC GGC AGC GCG			48
7557	Met His Met His His His His His Leu Val Pro Arg Gly Ser Ala			
7558	1	5	10	15
7559				
7560	CCC ATC ACG GCC TAC TCC CAA CAG ACG CGG GGC CTA CTT GGT TGC ATC			96
7561	Pro Ile Thr Ala Tyr Ser Gln Gln Thr Arg Gly Leu Leu Gly Cys Ile			
7562	20	25	30	
7563				
7564	ATC ACT AGC CTT ACA GGC CGG GAC AAG AAC CAG GTC GAG GGA GAG GTT			144
7565	Ile Thr Ser Leu Thr Gly Arg Asp Lys Asn Gln Val Glu Gly Glu Val			

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

 DATE: 12/09/98
 TIME: 16:07:21
INPUT SET: S30248.raw

7566	35	40	45	
7567				
7568	CAG GTG GTT TCC ACC GCA ACA CAA TCC TTC CTG GCG ACC TGC GTC AAC			192
7569	Gln Val Val Ser Thr Ala Thr Gln Ser Phe Leu Ala Thr Cys Val Asn			
7570	50	55	60	
7571				
7572	GGC GTG TGT TGG ACC GTT TAC CAT GGT GCT GGC TCA AAG ACC TTA GCC			240
7573	Gly Val Cys Trp Thr Val Tyr His Gly Ala Gly Ser Lys Thr Leu Ala			
7574	65	70	75	80
7575				
7576	GGC CCA AAG GGG CCA ATC ACC CAG ATG TAC ACT AAT GTG GAC CAG GAC			288
7577	Gly Pro Lys Gly Pro Ile Thr Gln Met Tyr Thr Asn Val Asp Gln Asp			
7578	85	90	95	
7579				
7580	CTC GTC GGC TGG CAG GCG CCC CCC GGG GCG CGT TCC TTG ACA CCA TGC			336
7581	Leu Val Gly Trp Gln Ala Pro Pro Gly Ala Arg Ser Leu Thr Pro Cys			
7582	100	105	110	
7583				
7584	ACC TGT GGC AGC TCA GAC CTT TAC TTG GTC ACG AGA CAT GCT GAC GTC			384
7585	Thr Cys Gly Ser Ser Asp Leu Tyr Leu Val Thr Arg His Ala Asp Val			
7586	115	120	125	
7587				
7588	ATT CCG GTG CGC CGG CGG GGC GAC AGT AGG GGG AGC CTG CTC TCC CCC			432
7589	Ile Pro Val Arg Arg Gly Asp Ser Arg Gly Ser Leu Leu Ser Pro			
7590	130	135	140	
7591				
7592	AGG CCT GTC TCC TAC TTG AAG GGC TCT TCG GGT CCA CTG CTC TGC			480
7593	Arg Pro Val Ser Tyr Leu Lys Gly Ser Ser Gly Gly Pro Leu Leu Cys			
7594	145	150	155	160
7595				
7596	CCT TCG GGG CAC GCT GTG GGC ATC TTC CGG GCT GCC GTA TGC ACC CGG			528
7597	Pro Ser Gly His Ala Val Gly Ile Phe Arg Ala Ala Val Cys Thr Arg			
7598	165	170	175	
7599				
7600	GGG GTT GCG AAG GCG GTG GAC TTT GTG CCC GTA GAG TCC ATG GAA ACT			576
7601	Gly Val Ala Lys Ala Val Asp Phe Val Pro Val Glu Ser Met Glu Thr			
7602	180	185	190	
7603				
7604	ACT ATG CGG TCT CCG GTC TTC ACG GAC AAC TCA TCC CCC CCG GCC GTA			624
7605	Thr Met Arg Ser Pro Val Phe Thr Asp Asn Ser Ser Pro Pro Ala Val			
7606	195	200	205	
7607				
7608	CCG CAG TCA TTT CAA GTG GCC CAC CTA CAC GCT CCC ACT GGC AGC GGC			672
7609	Pro Gln Ser Phe Gln Val Ala His Leu His Ala Pro Thr Gly Ser Gly			
7610	210	215	220	
7611				
7612	AAG AGT ACT AAA GTG CCG GCT GCA TAT GCA GCC CAA GGG TAC AAG GTG			720
7613	Lys Ser Thr Lys Val Pro Ala Ala Tyr Ala Ala Gln Gly Tyr Lys Val			
7614	225	230	235	240
7615				
7616	CTC GTC CTC AAT CCG TCC GTT GCC GCT ACC TTA GGG TTT GGG GCG TAT			768
7617	Leu Val Leu Asn Pro Ser Val Ala Ala Thr Leu Gly Phe Gly Ala Tyr			
7618	245	250	255	

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:07:22

INPUT SET: S30248.raw

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:07:22

INPUT SET: S30248.raw

7672	ACC GTG CCT CAA GAC GCA GTG TCG CGC TCG CAG CGG CGG GGT AGG ACT	1440
7673	Thr Val Pro Gln Asp Ala Val Ser Arg Ser Gln Arg Arg Gly Arg Thr	
7674	465 470 475 480	
7675		
7676	GGC AGG GGT AGG AGA GGC ATC TAC AGG TTT GTG ACT CCG GGA GAA CGG	1488
7677	Gly Arg Gly Arg Arg Gly Ile Tyr Arg Phe Val Thr Pro Gly Glu Arg	
7678	485 490 495	
7679		
7680	CCC TCG GGC ATG TTC GAT TCC TCG GTC CTG TGT GAG TGC TAT GAC GCG	1536
7681	Pro Ser Gly Met Phe Asp Ser Ser Val Leu Cys Glu Cys Tyr Asp Ala	
7682	500 505 510	
7683		
7684	GGC TGT GCT TGG TAC GAG CTC ACC CCC GCC GAG ACC TCG GTT AGG TTG	1584
7685	Gly Cys Ala Trp Tyr Glu Leu Thr Pro Ala Glu Thr Ser Val Arg Leu	
7686	515 520 525	
7687		
7688	CGG GCC TAC CTG AAC ACA CCA GGG TTG CCC GTT TGC CAG GAC CAC CTG	1632
7689	Arg Ala Tyr Leu Asn Thr Pro Gly Leu Pro Val Cys Gln Asp His Leu	
7690	530 535 540	
7691		
7692	GAG TTC TGG GAG AGT GTC TTC ACA GGC CTC ACC CAT ATA GAT GCA CAC	1680
7693	Glu Phe Trp Glu Ser Val Phe Thr Gly Leu Thr His Ile Asp Ala His	
7694	545 550 555 560	
7695		
7696	TTC TTG TCC CAG ACC AAG CAG GCA GGA GAC AAC TTC CCC TAC CTG GTA	1728
7697	Phe Leu Ser Gln Thr Lys Gln Ala Gly Asp Asn Phe Pro Tyr Leu Val	
7698	565 570 575	
7699		
7700	GCA TAC CAA GCC ACG GTG TGC GCC AGG GCT CAG GCC CCA CCT CCA TCA	1776
7701	Ala Tyr Gln Ala Thr Val Cys Ala Arg Ala Gln Ala Pro Pro Pro Ser	
7702	580 585 590	
7703		
7704	TGG GAT CAA ATG TGG AAG TGT CTC ATA CGG CTG AAA CCT ACG CTG CAC	1824
7705	Trp Asp Gln Met Trp Lys Cys Leu Ile Arg Leu Lys Pro Thr Leu His	
7706	595 600 605	
7707		
7708	GGG CCA ACA CCC TTG CTG TAC AGG CTG GGA GCC GTC CAA AAT GAG GTC	1872
7709	Gly Pro Thr Pro Leu Leu Tyr Arg Leu Gly Ala Val Gln Asn Glu Val	
7710	610 615 620	
7711		
7712	ACC CTC ACC CAC CCC ATA ACC AAA TAC ATC ATG GCA TGC ATG TCG GCC	1920
7713	Thr Leu Thr His Pro Ile Thr Lys Tyr Ile Met Ala Cys Met Ser Ala	
7714	625 630 635 640	
7715		
7716	GAC CTG GAG GTC GTT ACG TAG GAA TTC GAG CTC CGT CGA CAA GCT TGC	1968
7717	Asp Leu Glu Val Val Thr * Glu Phe Glu Leu Arg Arg Gln Ala Cys	
7718	645 650 655	
7719		
7720	GGC CGC ACT CGA GCA CCA CCA CCA CCA CCA CTG AGA TCC	2007
7721	Gly Arg Thr Arg Ala Pro Pro Pro Pro Leu Arg	
7722	660 665	
7723		
7724	(i) SEQUENCE CHARACTERISTICS:	

(2) INFORMATION FOR SEQ ID NO:12

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:07:23

INPUT SET: S30248.raw

7725	(A) LENGTH: 2007 base pairs	
7726	(B) TYPE: nucleic acid	
7727	(C) STRANDEDNESS: single	
7728	(D) TOPOLOGY: linear	
7729		
7730	(ii) MOLECULE TYPE: cDNA	
7731		
7732		
7733	(ix) FEATURE:	
7734	(A) NAME/KEY: CDS	
7735	(B) LOCATION: 1..2007	
7736		
7737		
--> 7738	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:120:	
7739		
7740	ATG CAT ATG CAT CAT CAC CAT CAT CTG GTG CCG CGC GGC AGC GCG	48
7741	Met His Met His His His His His Leu Val Pro Arg Gly Ser Ala	
7742	1 5 10 15	
7743		
7744	CCC ATC ACG GCC TAC TCC CAA CAG ACG CGG GGC CTA CTT GGT TGC ATC	96
7745	Pro Ile Thr Ala Tyr Ser Gln Gln Thr Arg Gly Leu Leu Gly Cys Ile	
7746	20 25 30	
7747		
7748	ATC ACT AGC CTT ACA GGC CGG GAC AAG AAC CAG GTC GAG GGA GAG GTT	144
7749	Ile Thr Ser Leu Thr Gly Arg Asp Lys Asn Gln Val Glu Gly Glu Val	
7750	35 40 45	
7751		
7752	CAG GTG GTT TCC ACC GCA ACA CAA TCC TTC CTG GCG ACC TGC GTC AAC	192
7753	Gln Val Val Ser Thr Ala Thr Gln Ser Phe Leu Ala Thr Cys Val Asn	
7754	50 55 60	
7755		
7756	GGC GTG TGT TGG ACC GTT TAC CAT GGT GCT GGC TCA AAG ACC TTA GCC	240
7757	Gly Val Cys Trp Thr Val Tyr His Gly Ala Gly Ser Lys Thr Leu Ala	
7758	65 70 75 80	
7759		
7760	GGC CCA AAG GGG CCA ATC ACC CAG ATG TAC ACT AAT GTG GAC CAG GAC	288
7761	Gly Pro Lys Gly Pro Ile Thr Gln Met Tyr Thr Asn Val Asp Gln Asp	
7762	85 90 95	
7763		
7764	CTC GTC GGC TGG CAG GCG CCC CCC GGG GCG CGT TCC TTG ACA CCA TGC	336
7765	Leu Val Gly Trp Gln Ala Pro Pro Gly Ala Arg Ser Leu Thr Pro Cys	
7766	100 105 110	
7767		
7768	ACC TGT GGC AGC TCA GAC CTT TAC TTG GTC ACG AGA CAT GCT GAC GTC	384
7769	Thr Cys Gly Ser Ser Asp Leu Tyr Leu Val Thr Arg His Ala Asp Val	
7770	115 120 125	
7771		
7772	ATT CCG GTG CGC CGG CGG GGC GAC AGT AGG GGG AGC CTG CTC TCC CCC	432
7773	Ile Pro Val Arg Arg Gly Asp Ser Arg Gly Ser Leu Leu Ser Pro	
7774	130 135 140	
7775		
7776	AGG CCT GTC TCC TAC TTG AAG GGC TCT TCG GGT GGT CCA CTG CTC TGC	480
7777	Arg Pro Val Ser Tyr Leu Lys Gly Ser Ser Gly Gly Pro Leu Leu Cys	

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

 DATE: 12/09/98
 TIME: 16:07:24
INPUT SET: S30248.raw

7778	145	150	155	160	
7779					
7780	CCT TCG GGG CAC GCT GTG GGC ATC TTC CGG GCT GCC GTA TGC ACC CGG				528
7781	Pro Ser Gly His Ala Val Gly Ile Phe Arg Ala Ala Val Cys Thr Arg				
7782	165	170		175	
7783					
7784	GGG GTT GCG AAG GCG GTG GAC TTT GTG CCC GTA GAG TCC ATG GAA ACT				576
7785	Gly Val Ala Lys Ala Val Asp Phe Val Pro Val Glu Ser Met Glu Thr				
7786	180	185		190	
7787					
7788	ACT ATG CGG TCT CCG GTC TTC ACG GAC AAC TCA TCC CCC CCG GCC GTA				624
7789	Thr Met Arg Ser Pro Val Phe Thr Asp Asn Ser Ser Pro Pro Ala Val				
7790	195	200		205	
7791					
7792	CCG CAG TCA TTT CAA GTG GCC CAC CTA CAC GCT CCC ACT GGC AGC GGC				672
7793	Pro Gln Ser Phe Gln Val Ala His Leu His Ala Pro Thr Gly Ser Gly				
7794	210	215		220	
7795					
7796	AAG AGT ACT AAA GTG CCG GCT GCC TAC GCA GCC CAA GGG TAC AAG GTG				720
7797	Lys Ser Thr Lys Val Pro Ala Ala Tyr Ala Ala Gln Gly Tyr Lys Val				
7798	225	230		235	
7799					
7800	240	245		250	
7801	CTC GTC CTC AAT CCG TCC GTT GCC GCT ACC TTA GGG TTT GGG GCG TAT				768
7802	Leu Val Leu Asn Pro Ser Val Ala Ala Thr Leu Gly Phe Gly Ala Tyr				
7803	255				
7804	ATG TCT AAG GCA CAC GGT ATT GAC CCC AAC ATC AGA ACT GGG GTA AGG				816
7805	Met Ser Lys Ala His Gly Ile Asp Pro Asn Ile Arg Thr Gly Val Arg				
7806	260	265		270	
7807					
7808	ACC ATT ACC ACA GGC GCC CCC GTC ACA TAC TCT ACC TAT GGC AAG TTT				864
7809	Thr Ile Thr Thr Gly Ala Pro Val Thr Tyr Ser Thr Tyr Gly Lys Phe				
7810	275	280		285	
7811					
7812	290	295		300	
7813	CTT GCC GAT GGT GGT TGC TCT GGG GGC GCT TAT GAC ATC ATA ATA TGT				912
7814	Leu Ala Asp Gly Gly Cys Ser Gly Gly Ala Tyr Asp Ile Ile Ile Cys				
7815	295				
7816	300				
7817	GAT GAG TGC CAT TCA ACT GAC TCG ACT ACA ATC TTG GGC ATC GGC ACA				960
7818	Asp Glu Cys His Ser Thr Asp Ser Thr Thr Ile Leu Gly Ile Gly Thr				
7819	305	310		315	
7820	315				320
7821	GTC CTG GAC CAA GCG GAG ACG GCT GGA GCG CGG CTT GTC GTG CTC GCC				1008
7822	Val Leu Asp Gln Ala Glu Thr Ala Gly Ala Arg Leu Val Val Leu Ala				
7823	325	330		335	
7824					
7825	ACC GCT ACG CCT CCG GGA TCG GTC ACC GTG CCA CAC CCA AAC ATC GAG				1056
7826	Thr Ala Thr Pro Pro Gly Ser Val Thr Val Pro His Pro Asn Ile Glu				
7827	340	345		350	
7828					
7829	GAG GTG GCC CTG TCT AAT ACT GGA GAG ATC CCC TTC TAT GGC AAA GCC				1104
7830	Glu Val Ala Leu Ser Asn Thr Gly Glu Ile Pro Phe Tyr Gly Lys Ala				
	355	360		365	

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:07:24

INPUT SET: S30248.raw

7831	ATC CCC ATT GAA GCC ATC AGG GGG GGA AGG CAT CTC ATT TTC TGT CAT		1152
7832	Ile Pro Ile Glu Ala Ile Arg Gly Gly Arg His Leu Ile Phe Cys His		
7833	370	375	380
7834			
7835			
7836	TCC AAG AAG AAG TGC GAC GAG CTC GCC GCA AAG CTG TCA GGC CTC GGA		1200
7837	Ser Lys Lys Lys Cys Asp Glu Leu Ala Ala Lys Leu Ser Gly Leu Gly		
7838	385	390	395
7839			400
7840	ATC AAC GCT GTG GCG TAT TAC CGG GGG CTC GAT GTG TCC GTC ATA CCA		1248
7841	Ile Asn Ala Val Ala Tyr Tyr Arg Gly Leu Asp Val Ser Val Ile Pro		
7842	405	410	415
7843			
7844	ACT ATC GGA GAC GTC GTT GTC GTG GCA ACA GAC GCT CTG ATG ACG GGC		1296
7845	Thr Ile Gly Asp Val Val Val Ala Thr Asp Ala Leu Met Thr Gly		
7846	420	425	430
7847			
7848	TAT ACG GGC GAC TTT GAC TCA GTG ATC GAC TGT AAC ACA TGT GTC ACC		1344
7849	Tyr Thr Gly Asp Phe Asp Ser Val Ile Asp Cys Asn Thr Cys Val Thr		
7850	435	440	445
7851			
7852	CAG ACA GTC GAC TTC AGC TTG GAT CCC ACC TTC ACC ATT GAG ACG ACG		1392
7853	Gln Thr Val Asp Phe Ser Leu Asp Pro Thr Phe Thr Ile Glu Thr Thr		
7854	450	455	460
7855			
7856	ACC GTG CCT CAA GAC GCA GTG TCG CGC TCG CAG CGG CGG GGT AGG ACT		1440
7857	Thr Val Pro Gln Asp Ala Val Ser Arg Ser Gln Arg Arg Gly Arg Thr		
7858	465	470	475
7859			480
7860	GGC AGG GGT AGG AGA GGC ATC TAC AGG TTT GTG ACT CCG GGA GAA CGG		1488
7861	Gly Arg Gly Arg Arg Gly Ile Tyr Arg Phe Val Thr Pro Gly Glu Arg		
7862	485	490	495
7863			
7864	CCC TCG GGC ATG TTC GAT TCC TCG GTC CTG TGT GAG TGC TAT GAC GCG		1536
7865	Pro Ser Gly Met Phe Asp Ser Ser Val Leu Cys Glu Cys Tyr Asp Ala		
7866	500	505	510
7867			
7868	GGC TGT GCT TGG TAC GAG CTC ACC CCC GCC GAG ACC TCG GTT AGG TTG		1584
7869	Gly Cys Ala Trp Tyr Glu Leu Thr Pro Ala Glu Thr Ser Val Arg Leu		
7870	515	520	525
7871			
7872	CGG GCC TAC CTG AAC ACA CCA GGG TTG CCC GTT TGC CAG GAC CAC CTG		1632
7873	Arg Ala Tyr Leu Asn Thr Pro Gly Leu Pro Val Cys Gln Asp His Leu		
7874	530	535	540
7875			
7876	GAG TTC TGG GAG AGT GTC TTC ACA GGC CTC ACC CAT ATA GAT GCA CAC		1680
7877	Glu Phe Trp Glu Ser Val Phe Thr Gly Leu Thr His Ile Asp Ala His		
7878	545	550	555
7879			560
7880	TTC TTG TCC CAG ACC AAG CAG GCA GGA GAC AAC TTC CCC TAC CTG GTA		1728
7881	Phe Leu Ser Gln Thr Lys Gln Ala Gly Asp Asn Phe Pro Tyr Leu Val		
7882	565	570	575
7883			

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/198,723**

DATE: 12/09/98
TIME: 16:07:25

INPUT SET: S30248.raw

7884	GCA TAC CAA GCC ACG GTG TGC GCC AGG GCT CAG GCC CCA CCT CCA TCA	1776
7885	Ala Tyr Gln Ala Thr Val Cys Ala Arg Ala Gln Ala Pro Pro Pro Ser	
7886	580	585
7887		590
7888	TGG GAT CAA ATG TGG AAG TGT CTC ATA CGG CTG AAA CCT ACG CTG CAC	1824
7889	Trp Asp Gln Met Trp Lys Cys Leu Ile Arg Leu Lys Pro Thr Leu His	
7890	595	600
7891		605
7892	GGG CCA ACA CCC TTG CTG TAC AGG CTG GGA GCC GTC CAA AAT GAG GTC	1872
7893	Gly Pro Thr Pro Leu Leu Tyr Arg Leu Gly Ala Val Gln Asn Glu Val	
7894	610	615
7895		620
7896	ACC CTC ACC CAC CCC ATA ACC AAA TAC ATC ATG GCA TGC ATG TCG GCC	1920
7897	Thr Leu Thr His Pro Ile Thr Lys Tyr Ile Met Ala Cys Met Ser Ala	
7898	625	630
7899		635
7900	640	645
7901	GAC CTG GAG GTC GTT ACG TAG GAA TTC GAG CTC CGT CGA CAA GCT TGC	1968
7902	Asp Leu Glu Val Val Thr * Glu Phe Glu Leu Arg Arg Gln Ala Cys	
7903	650	655
7904	GGC CGC ACT CGA GCA CCA CCA CCA CCA CCA CTG AGA TCC	2007
7905	Gly Arg Thr Arg Ala Pro Pro Pro Pro Pro Leu Arg Ser	
7906	660	665

(2) INFORMATION FOR SEQ ID NO:1

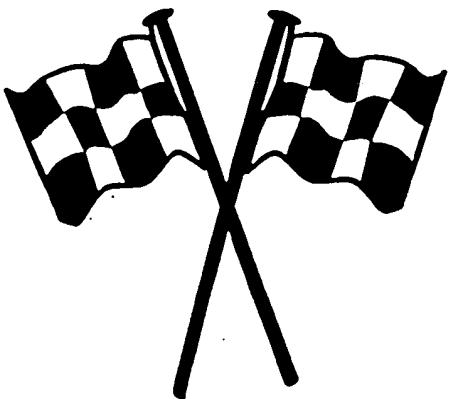
09/198723

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:123:

GCTCGCCCGG GGATCCTCTA G

21

1
...
Delete at end) file



Examiner Please Note:

This sequence listing follows the Old Rule Format but has a filing date on/after July 1, 1998.

Please determine the effective filing date of the case.

- If it is before July 1, 1998 - Applicants were correct in following the Old Rule Format -
→→ Nothing further needs to be done.
- If it is after July 1, 1998 - Applicants should follow the New Rule Format -
→→ Please request them to submit a new Sequence Listing (both in electronic and paper format) following the New Rule Format.